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DEVELOPMENT OF WATER RESOURCES IN APPALACHIA. REPORT OF THE SEC--ETC(U)  
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REPORT  
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SECRETARY OF THE ARMY

based on  
Studies Prepared  
by the

OFFICE OF APPALACHIAN STUDIES

REPORT OF THE SECRETARY OF THE ARMY

April 1971

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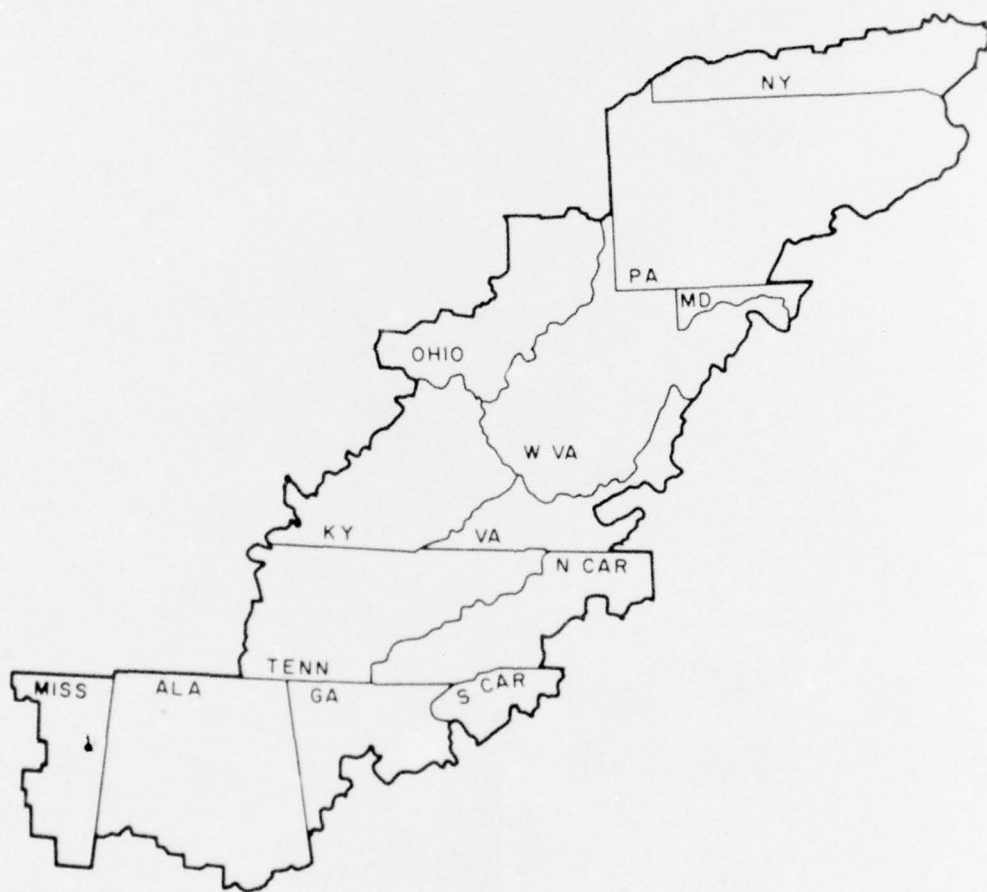
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**REPORT OF THE SECRETARY OF THE ARMY  
ON THE DEVELOPMENT OF WATER RESOURCES IN APPALACHIA**

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# REPORT OF THE SECRETARY OF THE ARMY ON THE DEVELOPMENT OF WATER RESOURCES IN APPALACHIA

## I. SUMMARY AND RECOMMENDATIONS

### INTRODUCTION

#### 1. Conduct of the Study

This report is submitted in response to Section 206 of the Appalachian Regional Development Act of 1965, which states in part:

"Sec 206. (a) The Secretary of the Army is hereby authorized and directed to prepare a comprehensive plan for the development and efficient utilization of the water and related resources of the Appalachian region, giving special attention to the need for an increase in the production of economic goods and services within the region as a means of expanding economic opportunities and thus enhancing the welfare of its people, which plan shall constitute an integral and harmonious component of the regional economic development program authorized by this Act."

The report is based upon studies performed by the Office of Appalachian Studies, U. S. Army Corps of Engineers, under the supervision of Colonel John C. H. Lee, Jr. The studies by the Office of Appalachian Studies <sup>1/</sup> constitute a landmark effort in comprehensive water resources planning since they have provided the basis for the first Department of Army report in which (a) projects have been evaluated within the framework of multi-objective planning and (b) the planning and budgeting processes have been integrated by using the Department of Army's program budgeting system to formulate an early action program.

#### 2. Appalachian Water Resources Planning

The water resources plan for Appalachia was developed through the cooperative efforts of the Federal agencies and the States with the help of the Appalachian Regional Commission. Emerging state investment plans and the on-going programs of the principal federal agencies were evaluated for their potential for stimulating regional growth and to provide a basis for a new statement of water needs in terms of regional development objectives.

Over 100 major water projects and over 500 upstream watershed projects were considered by the cooperating federal and state agencies for their potential contribution to the Appalachian water resources plan. These proposals were screened to discern those which would come closest to the objectives of the survey, and among those screened were programs and projects that can form the elements for a future and continuing water resource program in Appalachia. This process led to recommendations for an early action plan, future studies, federal agency programs and programs of the Appalachian states.

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<sup>1/</sup> Citations to chapters and pages herein refer to Part I of these published studies.

### 3. An Overview of the General Plan

The general water and related land resource plan developed by the Office of Appalachian Studies, upon which my recommendations have been based, must ultimately reflect a significant commitment by both the public and private sector for its implementation. In order that the magnitude and complexity of the general plan may be assessed, the cost of its major components is summarized below:

#### State Projects

##### Pennsylvania

Total Program Cost:	\$ 20 million
Recreation	[ 20 million]

#### Federal Projects

##### Department of Agriculture

Total Program Cost: <sup>1/</sup>	\$1,802 million
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Upstream Watershed Projects <sup>1/</sup>	[ 506 million]
-------------------------------------------	----------------

High Priority Projects (42) <sup>2/</sup>	(138 million)
Flood control	89 million
M&I Water Supply	10 million
Recreation	39 million

Additional Projects (91) <sup>3/</sup>	(232 million)
Flood control	142 million
M&I Water Supply	14 million
Recreation	32 million
Basic Facilities	38 million
Other Functions	6 million

Other Projects (72) <sup>3/</sup>	(136 million)
-----------------------------------	---------------

Land Treatment Measures	[ 513 million]
-------------------------	----------------

Cropland	43 million
Grassland	26 million
Forests and Woodland	179 million
Roadbank Stabilization	39 million
Reclamation of Surface-Mined Areas	25 million
Recreation & Wildlife	155 million
Conservation Planning & Soil Surveys	46 million

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<sup>1/</sup> Exclusive of 37 potential upstream watershed projects; includes non-Federal costs.

<sup>2/</sup> See Paragraph 3 of Specific Recommendations, page 9.

<sup>3/</sup> See Paragraph 4 of Specific Recommendations, page 9.

**Federal Projects (continued)**

**Department of Agriculture (continued)**

<b>National Forests <sup>*/</sup></b>	<b>[783 million]</b>
Fire Protection & Fish & Wildlife	4 million
Recreation Developments	360 million
Transportation Facilities	172 million
Land Adjustment	247 million

**Department of Army <sup>1/</sup>**

Total Program Cost: \$ 812 million

**Navigation Improvement (Previously Authorized) <sup>2/</sup>** [210 million]

**Projects for Immediate Authorization <sup>3/</sup>** [280 million]

Flood control	93 million
M&I Water Supply	32 million
Water Quality	29 million
Recreation	124 million
Land treatment	2 million

**Projects to be Considered for  
Future Authorization <sup>4/</sup>** [322 million]

Flood control	70 million
M&I Water Supply	6 million
Water Quality	61 million
Recreation	113 million
Power	69 million
Irrigation	1 million
Nature Preserve	2 million

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<sup>\*/</sup> See footnote 3 of preceeding page.

<sup>1/</sup> Program presented here is exclusive of a number of authorized projects that are part of the general plan (see Chapter 6); includes non-Federal costs.

<sup>2/</sup> Listed in paragraph 5 of Specific Recommendations, page 9.

<sup>3/</sup> Listed in paragraph 6 of Specific Recommendations, page 10.

<sup>4/</sup> Pending completion of additional environmental and economic studies, these projects, listed in paragraph 7 of Specific Recommendations, page 15, are not presently incorporated in the general plan.

## **Federal Projects (continued)**

### **Tennessee Valley Authority**

Total Program Cost:	\$ 107 million
Flood control	48 million
M&I Water Supply	7 million
Water Quality	21 million
Recreation	24 million
Navigation	7 million

It should be noted that various elements of the plan will require the concentrated and coordinated efforts of all levels of government and that all the necessary authorities and legislation for implementing this plan are not presently available to either the Federal Agencies or the States. Consequently, the complete implementation of the plan outlined herein will require additions, changes or modifications to established water resource authorities.

## **POLICY ISSUES**

No study, however exhaustive, completely resolves all of the issues raised during its preparation. In order that these issues may be discussed and debated with the objective of providing an insight for this and future studies, several of the major problems, as well as the resulting policy decisions which emerged during the preparation of this report, are delineated below.

### **1. Enhancement and Restoration of the Environment**

In preparing the Appalachian Water Resource Plan, considerable attention has been given to assessing the effects a proposed project would have on the environment. Many of the projects and programs in the plan will enhance the environment by improving the quality of the water through low flow augmentation, by reducing erosion and sedimentation through conservation and land treatment measures, and by controlling acid mine wastes; by providing open space facilities to meet the needs of the people for water based recreation; by safeguarding and enhancing fish and wildlife resources by providing refuges, trout rearing facilities and cold water fishing sites; and finally by preserving unique ecological areas through public acquisition.

In those instances where adverse ecological effects will occur due to the construction of a proposed project, every reasonable compensatory action has been proposed to mitigate these effects. It has not been possible, however, to eliminate all the adverse effects resulting from some of the projects considered and proposed in the plan. The problem then becomes one of balancing the need for development against the need for preservation of our natural resources. In striking this balance, ecological as well as engineering and economic considerations were carefully weighed. For those projects on which additional information is needed prior to making a detailed assessment of their effects on the environment, the specific environmental and ecological studies to be undertaken prior to considering project authorization have been identified.



A decision to forego development by the Federal Government does not necessarily guarantee that a rare ecological site or an irreplaceable scenic area will be preserved by the private sector. Only if a deliberate and concentrated effort is made to preserve a resource in its present state by, for example, purchasing lands or scenic easements or dedicating a site to a conservatory body, will the decision in fact be limited to a choice between building a project and preserving the area.

## 2. Establishing Priorities for the Recommended Projects

The costs of the water and related projects and programs included as part of the general plan are in excess of \$2.3 billion. Recognizing that these projects must compete not only with water resource investments which might be undertaken outside the Appalachian Region, but that they must also compete with other public programs in Appalachia, it is unlikely that funds of this magnitude will be available in the near future. For these reasons it is imperative that a priority system be established for the implementation of the general plan, the specific projects recommended herein for early action, and previously authorized projects. In developing project priorities, it is suggested that each project be assessed in terms of its contribution to the overall development of Appalachia with particular emphasis placed upon (1) the priorities set forth in Table 11-1 of the Summary Report of the Office of Appalachian Studies, (2) the priorities set forth in the State Water Supplements, (3) the priorities set forth in the "Early Action Program for Appalachian Water Resources Development" which is appended to the letter from the Secretary of Agriculture, and (4) the following indices of performance developed in the studies of the Office of Appalachian Studies:

National Income		Regional Expansion	
Index	Project	Index	Project
1.9	Otocsin	10.2	Yellow Cr. Port
1.7	Clinchfield	9.4	Midland LPP
1.5	Hipes	6.7	Clinchfield
1.3	U. Fr. Broad System	5.0	Whiteoak
1.2	Curry Creek	4.8	Royalton-Salyersville
1.2	Stannard	3.3	Roaring River
1.2	Naturealm	3.1	Curry Creek
1.2	Tamaqua LPP	2.6	U. Fr. Broad System
1.1	Dalton	2.5	Dalton
1.1	St. Petersburg	2.3	Coosa Navigation
1.1	Coosa Navigation	2.2	St. Petersburg
1.03	Logan	2.2	Naturealm
1.03	Roaring River	1.8	Otocsin
0.96	Royal Glen	1.8	Tamaqua LPP
0.95	Whiteoak	1.6	Royal Glen
0.8	Yellow Cr. Port	1.4	Stannard
0.6	Lower Knox	1.2	Logan
0.44	Royalton-Salyersville	0.8	Hipes
0.4	Midland LPP	0.3	Lower Knox

## 3. Assessing the Role of Water Resource Projects in Regional Development

The recommendations for some of the projects contained in this report are based on complementary programs and actions by other federal agencies, the Appalachian Regional Commission, or its successor, the individual states, local governmental entities, and in

particular, private interests. Coordination and timing are essential to fully capture the regional development benefits associated with these projects. Investment of substantial capital by the private sector is a critical requirement and this must be preceded by action and effective programs at the state and local level to attract private industry to the area. Accordingly, a criterion to be met by local interests is that they provide the Secretary of the Army, prior to construction, with reasonable assurances that the level of induced economic activity projected in the project report is likely to occur.

In order to provide a basis for assessing the effectiveness of local interests in organizing and developing such programs, as well as to provide a basis for improving the procedures used to estimate the developmental effects of proposed water resource projects in Appalachia and elsewhere, one of the projects included in the plan should be designed and constructed as soon as possible.

#### **4. Non-Federal Reimbursement**

I have carefully considered recommendations that costs be allocated to economic development as a project purpose. This is the approach initially taken by the Office of Appalachian Studies and there are a number of reasons supporting the logic of such a procedure. It is clear that one of the purposes of the Appalachian Regional Development Act was the stimulation of regional economic development. It is also true that where an objective such as regional economic development is considered as a "project purpose" the application of conventional cost allocation procedures would result in the allocation of costs to this purpose.

I have concluded, however, that costs should not be allocated to economic development. The whole system of allocating costs of various project purposes is excessively complex, and future changes in cost allocation policies should be in the direction of simplification. The unprecedented allocation of cost to regional development would increase, rather than reduce, the complexity of allocation procedures. Moreover, I am troubled by the concept of allocating costs to a project purpose where the benefits associated with the cost allocation procedure are much more difficult to measure than the benefits associated with more traditional project purposes. Traditional cost allocation procedures permit the manipulation of benefit estimates for the purpose of affecting cost-sharing. The use of economic development benefits in the cost allocation process increases the opportunity for such manipulation.

Furthermore, even if costs were allocated to economic development as a project purpose, it is not clear that the project purpose should receive 100% Federal funding. Economic development benefits are largely regional in nature. This suggests that some or all of the costs allocated for such a purpose should be treated as a responsibility of local interests.

Perhaps the most important reason for not allocating costs to economic development is that such a procedure tends to bury, in the mechanics of cost allocation procedures, questions of high policy, which should be spotlighted, addressed and decided by representatives of the President and the Congress. A decision to favor one region of the country over another in the formulation of water resources projects deserves the most careful attention at the highest levels of Government. There may be a number of alternative ways of addressing the desirability of such regional development, and the basic decisions ought not to be made in a rigid context of cost allocation procedures.

Accordingly, my recommendation for cost-sharing is not based upon allocating costs to expansionary benefits but rather on a liberalized cost reimbursement provision allowing the Federal Government to advance the local share of the costs for all non-vendible outputs, consisting of recreation, fish and wildlife, and local flood protection, with no repayment and no interest accrual up to ten years, and with repayment thereafter, with interest, over a period of fifty years. Similar opportunity for deferral of payment and a ten-year interest free period is already available for future water supply under the provisions of the 1958 Water Supply Act. My proposal does not affect the overall recommendations concerning the merits of projects. Should either increased or reduced cost-sharing be desired by the Congress, I recommend that special legislation along the lines of that provided in the Appalachian Regional Development Act for other programs be developed, or that the authorizing legislation for this report reflect the modified cost-sharing.

#### **5. Statutory Authority and the Exploration of Alternatives**

The Appalachian survey is the first comprehensive water resource plan submitted by the Department of the Army to the President and Congress in which multiple objectives are identified explicitly and for which the projects in the plan are assessed in terms of their contribution to each of these objectives. While the plan set forth in the published studies of the Office Appalachian Studies accords the greatest emphasis to the regional development objective, the contribution that the proposed projects make to other objectives, such as increasing the national income and enhancing the quality of the environment, is also assessed although not always in equal detail.

Multiple objective planning consists not only of an identification of alternative objectives but also of a delineation of the alternative means for accomplishing each of these objectives. The Appalachian Act provides the strategy for development of the region encompassing a wide range of objectives including programs for education, health, transportation and others affecting the welfare of the people. The development of the water plan is only one element of that strategy. As such, the study did not deal directly with broader alternatives for economic development which are elements of programs within the purview of the Appalachian Regional Commission, or its successor.

However, even within the context of developing the water resources plan, all of the alternative means for fulfilling the water resource needs of the region were not examined in detail since some of the alternatives are not authorized by existing statutes, including for example, the construction of regional waste water treatment systems and designing and constructing distribution systems for municipal and industrial water supply. At the start of the study, it was decided that the early action program should conform generally to established national authorities and policies governing the formulation of water resource projects, and thus avoid extensive delays which would be encountered in the establishment of new areas of federal responsibility.

This current plan, particularly the early action component, is not complete, and subsequent revisions should reflect the changing economic conditions in the Appalachian Region and provide for the remaining water resource development needs through other programs.

#### **6. Screening of Projects**

The plan for the development of the water resources of Appalachia contains many recommendations regarding programs which should be undertaken by both the public and

the private sectors. A large number of projects were considered and rejected in arriving at the early action program of the Department of the Army, some of which were not selected for detailed study for reasons such as: a poor economic response, adverse effects on the environment, lack of local support, and insufficient study resources. A general review also was made of existing and authorized projects in the interest of integrating their impacts on the region's economy. The report does not fully describe the considerations and value judgments made during this screening process. However, future comprehensive reports should identify and describe the alternatives considered, but rejected, during the planning process.

### GENERAL RECOMMENDATIONS

#### I recommend:

1. **Acceptance of the Plan.** That the general plan herein submitted be adopted by Congress as the basis for continuing regional water resources development and planning in the Appalachian Region;
2. **Early Action on Components of the Plan.** That the Governors of the Appalachian States take early action to obtain any legislative authorities that are necessary to fulfill the requirements of local cooperation, particularly those relating to flood plain management and to implementing local development programs which are essential elements of the overall program for economic development of the Region;
3. **Continuity of the Appalachian Program.** That the recommended water resources plan be implemented as a part of the Appalachian regional development program;
4. **Technical Coordination During Plan Implementation.** That federal agencies be required during preconstruction planning studies of authorized water resource development projects to coordinate their efforts with the development activities of the Appalachian Regional Commission or its successor, the Appalachian States, and the programs of other federal and local agencies;
5. **Full Recreation Potential of Appalachia.** That, since the plan herein submitted does not meet the needs in 1980 for water-oriented recreation, based on preliminary estimates by the Bureau of Outdoor Recreation, the Appalachian Regional Commission, or its successor, undertake, with the Appalachian States and the Local Development Districts, and in consultation with the appropriate federal agencies, a study to define a long-range plan for the full development of the recreation potential of the Region including the desires of its citizens and the ability of the Region to offer water-oriented recreation opportunities;
6. **Previously Authorized Projects and Programs.** That previously authorized and economically justified projects and programs, which are necessary elements of the plan developed herein and essential to the successful outcome of the Appalachian development program, be constructed in accordance with priorities to be established for the entire program;
7. **Non-Structural Measures.** That when "non-structural" measures such as flood-proofing and flood warning systems reduce flood damages more effectively than do other alternatives, that the Federal Government share in the cost of these non-structural measures.



8. **Joint Private and Public Development Programs.** That in view of the changing development patterns of the Appalachian Region the actions outlined herein be continually assessed by the Appalachian Regional Commission (or its successor) and by the action agencies, and that such assessment give particular attention to the projected response of the private sector to public investments in Appalachia.

## **SPECIFIC RECOMMENDATIONS**

**I also recommend:**

### **Early Action Elements by Individual States**

1. **Otocsin Lake and Naturealm Projects.** Implementation of the Otocsin and Naturealm projects by the Commonwealth of Pennsylvania in cooperation with the interested Executive Departments of the United States and the Congress, and that high priority be given under appropriate Federal grant-in-aid programs for these projects;

### **Early Action Elements by Tennessee Valley Authority**

2. **Upper French Broad and Yellow Creek Port Projects.** That the Upper French Broad and Yellow Creek Port Projects be included in the overall plan for the development of water resources in Appalachia and that their budgetary priority be established after a review of other urgently needed TVA projects;

### **Early Action Elements by the Department of Agriculture**

3. **Selected Upstream Watershed Projects.** That the Secretary of Agriculture be authorized to proceed, in joint studies with the Corps of Engineers, with the detailed planning of the forty-two Appalachian upstream watershed projects tabulated on page I-7-7 of this Summary Report, giving special consideration to the sixteen projects included in this group which preliminary investigations showed to have considerable developmental promise but limited user benefits, and that he submit these watershed work plans to the Congress through the President for consideration, in accordance with the principles and criteria of Public Law 83-566, as amended, and Public Law 89-4;

4. **Other U. S. Department of Agriculture Recommendations.** That initial program recommendations covering the accelerated planning and installation of two hundred additional upstream watersheds (of which 163 have been evaluated), accelerated land treatment, and additional recreation and other developments in the National Forests incorporated and scheduled in the plan, be given special consideration by the Department of Agriculture as a part of the comprehensive plan for the development of the Appalachian Region, after consultation with the Appalachian States, as appropriate, and the Appalachian Regional Commission;

### **Early Action Elements by the Army Corps of Engineers**

5. **Coosa River Navigation Project.** That the section of the authorized Coosa River navigation project between Montgomery, Alabama, and Rome, Georgia, be reclassified as an active project on the basis of the economic reevaluation contained in this report; that state and local plans and preparations for accelerating economic development in the areas served

by the project be phased with project planning to permit early realization of developmental potentials; and that prior to initiation of construction of any element of the project, the Secretary of the Army shall have determined to his satisfaction that there is reasonable assurance that programs and measures necessary to justify the project will be instituted in such manner as to secure the effective realization of the plan objectives set forth in this report, basing his determinations, among other things, on the status of actions by non-Federal interests to:

a. assure that a competent and appropriate public body, quasi-public body, or private non-profit development corporation is available to achieve the economic development objectives of the plan and to furnish assurances of non-Federal participation as may not be furnished by other non-Federal interests;

b. furnish a plan of the programs and measures necessary to achieve the economic development objectives of the project, which programs shall assure that the necessary lands shall be available, that windfall gains in the private sector shall be precluded and that the appropriate commitment by private entities is likely to occur;

6. **Ten Specific Projects.** That the Congress authorize the water resources projects listed below to provide for their construction, operation, and maintenance as federal projects, except as may be provided hereafter, by the Chief of Engineers under the direction of the Secretary of the Army in accordance with the selected plan described in this report and with such modifications as in the discretion of the Secretary of the Army may be advisable:

Project, Location & River Basin	Estimated Total First Cost	Net Federal Cost After Repayment	Est. Federal Average Annual Operation, Maintenance & Replacement Cost
Royalton Reservoir - Salyersville Area (including accelerated land treatment) Licking River, Ky. Ohio	\$ 45,505,000	\$ 41,725,000	\$ 60,000
Tamaqua LPP Tamaqua, Pa. Delaware	2,355,000	2,279,000	0
Royal Glen Reservoir South Branch, W.Va. Potomac	29,080,000	29,030,000	132,500
Hipes Reservoir Craig Creek, Va. James	23,547,000	23,038,000	258,000
Clinchfield Reservoir Broad River, N&S Car. Santee	58,565,000	29,966,000	58,000

**TABLE (continued)**

Project, Location & River Basin	Estimated Total First Cost	Net Federal Cost After Repayment	Est. Federal Average Annual Operation, Maintenance & Replacement Cost
Roaring River Res. Yadkin River, N.Car. Pee Dee	10,758,000	9,428,000	49,000
Curry Creek Reservoir N. Oconee River, Ga. Altamaha	17,757,000	9,255,000	47,000
Dalton Reservoir Conasauga River, Ga. Coosa	44,300,000	37,336,000	91,000
Whiteoak Reservoir Whiteoak Cr., O. Ohio	40,031,000	23,450,000	40,200
Midland LPP Licking River, Ky. Ohio	8,230,000	7,564,000	0
Totals	\$280,128,000	\$213,071,000	\$ 735,700

**Provided:**

a. That prior to commencement of construction of any element of the plan by the Department of the Army, that the Secretary of the Army shall have determined to his satisfaction (and on the Royalton-Salyersville project after consultation with the Secretary of Agriculture) that there is reasonable assurance that programs and measures necessary for the accomplishment of the economic development objectives of the plan will be instituted, basing this determination, among other things, on the status of actions by non-Federal interests in each case to:

(1) assure the existence of a competent and appropriate public body, quasi-public body, or private non-profit development corporation with adequate authority to achieve the economic development objectives of the plan and to furnish assurances of non-Federal participation as specified below and as may not be furnished by other non-Federal interests;

(2) furnish all assurances of non-Federal participation as specified below, except that the furnishing of the assurances required with respect to the land treatment measures of the Royalton-Salyersville plan shall not be prerequisite to initiation of construction of other elements of the plan; and

(3) furnish a plan of the programs and measures necessary to achieve the economic development objectives of the projects, which programs shall assure that the necessary lands shall be available, that windfall gains in the private sector shall be precluded and that the appropriate commitment by private entities is likely to occur;

b. That the Secretary of the Agriculture assume responsibilities for Rockhouse Fork, Burning Fork, and Mash Fork structures and the accelerated land treatment components of the Royalton Reservoir - Salyersville Area plan;

c. That the authorization of Whiteoak Reservoir provides for the acquisition of 5,500 acres of land, above what would normally be acquired for the project, at an estimated cost of \$2,917,000, for the migratory waterfowl refuge and hunting unit;

d. That the storage allocation in the Curry Creek Reservoir be examined during advanced engineering and design studies to determine the requirements for water quality control storage;

e. That the authorization of the Hipes Reservoir provides for the construction of a trout rearing station;

f. That the authorization of the Hipes, Dalton, and Curry Creek Reservoirs provides for the development of downstream fishing access areas and the acquisition of the lands therefor as follows: Hipes - 6 areas totalling 12 acres; Dalton - 6 areas totalling 12 acres, and Curry Creek - 11 areas totalling 11 acres;

g. That, prior to construction of Royal Glen Reservoir and Channel, additional studies be made of the following:

(1) the environmental benefits and costs associated with maintaining the South Branch of the Potomac in a free-flowing state, such a study to be conducted in close coordination with the Department of Interior and the Environmental Protection Agency;

(2) a local protection channel-and-levee project at Petersburg as an alternative to the reservoir;

(3) separate projects for flood control (such as a reservoir and channel improvements) and for recreation (which may or may not include reservoirs); and

(4) the residual flood potential with flood protection to determine whether an increased level of protection should be provided.

h. That the authorization of Dalton Reservoir provide for the reimbursement of up to \$1,750,000 to local interests should they construct interim water supply works on the Conesauga River in accordance with the guidance of the Secretary of the Army.

i. That non-Federal interests will:

(1) for the projects listed below, repay all costs allocated to water supply in accordance with the Water Supply Act of 1958, PL 85-500, as amended, which are presently estimated as follows:

<u>Project</u>	<u>First Cost</u>	<u>Average Annual Operation, Maintenance, and Replacement Cost</u>
Royalton	\$ 556,000	\$ 0
Clinchfield	14,535,000	49,000
Roaring River	872,000	6,000
Curry Creek	4,473,000	54,000
Dalton	3,114,000	10,000
Whiteoak	8,137,000	17,000



(2) for the projects or project components listed below, in accordance with the provisions of the Federal Water Project Recreation Act, PL 89-72, but with the additional provision of no repayment and no interest accrual on the separable costs for ten years, and with repayment thereafter, with interest, over a 50-year period, and applicable also to Rockhouse Fork structure of the Royalton Reservoir - Salyersville Area plan, notwithstanding Section 6(d) of that Act:

(a) administer project lands, facilities, and water areas for recreation, including fish and wildlife enhancement, and assure access to such development to all on equal terms;

(b) pay, contribute in kind, or repay (which may be through user fees) with interest, no less than one-half of the separable first costs allocated to recreation, including fish and wildlife enhancement;

(c) bear all costs of operation, maintenance, and replacements of fish and wildlife and recreation use lands and facilities;

The presently estimated costs for (b) and (c) above are:

<u>Project</u>	<u>One-Half Separable First Cost</u>	<u>Average Annual Operation, Maintenance, and Replacement Cost</u>
Royalton Reservoir & Rockhouse Fork	\$ 1,384,200	\$ 56,000
Hipes Reservoir (trout rearing station * and downstream fishery only)	509,000	80,000
Clinchfield Reservoir	14,064,000	580,000
Roaring River Reservoir	458,000	39,000
Curry Creek Reservoir	4,029,000	63,000
Dalton Reservoir	3,850,000	292,000
Whiteoak Reservoir	8,444,000	286,000

\*PL 89-72 is not applicable to trout rearing station; however, similar principles of non-Federal cooperation are recommended.

(3) for the local flood protection projects or local protection components of projects listed below:

(a) provide without cost to the United States all lands, easements, rights-of-way, and, except for railroad bridges and approaches, alterations and relocations;

(b) hold and save the United States free from damages due to the construction works, and operation and maintenance of improvements; and at least annually notify affected interests of the limited flood protection provided by the recommended works at Tamaqua, Pennsylvania, Petersburg, West Virginia, and Midland and Salyersville, Kentucky;

(c) operate and maintain the completed works in accordance with regulations prescribed by the Secretary of the Army or, for the three Department of Agriculture structures in the Royalton Reservoir - Salyersville Area plan, by the Secretary of Agriculture after consultation with the Secretary of the Army;

The presently estimated costs for (a) and (c) above are:

<u>Project</u>	<u>First Cost</u>	<u>Average Annual Operation, Maintenance, and Replacement Cost</u>
Royalton Reservoir - Salyersville Area:		
1. Licking River and State Road Fork Channel Improvements	\$ 605,000	\$ 4,200
2. Rockhouse Fork, Burning Fork, and Mash Fork Structures	901,800	2,100
Tamaqua Local Protection Project	76,000	2,000
Royal Glen, Petersburg W. Va.	50,000	2,500
Midland LPP	666,000	85,700

(4) for the accelerated land treatment measures of the Royalton Reservoir - Salyersville Area plan, assume financial and other responsibilities in accordance with the provisions of Section 203 of the Appalachian Regional Development Act, PL 4, 89th Congress, presently estimated at \$333,000;

(5) furnish assurances satisfactory to the Secretary of the Army or, where appropriate, other Departmental Secretary, prior to commencement of construction of any project that they will, for the pertinent projects:

(a) assume the previously listed non-Federal responsibilities;

(b) provide through zoning, purchase or otherwise, those additional lands, easements, and rights-of-way for the Licking River channel improvement below the Royalton Reservoir necessary to assure development and maintenance of park-like environment, and public access thereto;

(c) for all projects, hold and save the United States free from damages from water rights claims resulting from implementation and operation of the projects except for damages stemming from operation for flood control;

(d) for all projects having flood control as a purpose, prescribe and enforce regulations to prevent obstruction or encroachment on the channels and interior ponding areas which would reduce their flood carrying capacity or hinder repair and operation, and control development of fringe areas not protected by the improvements, with a view to preventing an undue increase in the flood damage potential;

(e) exercise control against removal of streamflow made available for water quality control, and effect proper measures by adequate treatment or other methods of controlling waste at the source, to assure the effectiveness of water quality control measures provided; and

(f) assume title to all Federal interests in lands, easements, and rights-of-way acquired by the United States in lieu of non-Federal acquisition, as provided in the following sub-paragraph, as each element becomes operational;

j. That, except for the accelerated land treatment measures, all lands, easements, rights-of-way, alterations and relocations, to be provided and performed by non-Federal interests without cost to the United States may, at the request of such non-Federal interests, be acquired, performed, or assumed by the United States, provided that the cost of such acquisition, performance, or assumption plus interest during construction shall be repaid by such non-Federal interests with interest computed on the unpaid balance and compounded annually, within 60 years from the date that each project element for which the acquisition and performance is accomplished becomes operational, at a repayment rate satisfactory to the Secretary of the Army or the Secretary of Agriculture, as appropriate; provided further, that during the first ten years after each project element so becomes operational no interest shall accrue and repayment, although it may be made, is not required; and that the interest rate shall be determined in accordance with the formula set forth in the Water Supply Act of 1958, PL 85-500, as amended;

k. That the final cost sharing determinations be based on the cost allocations to be made at the time of project completion;

l. That, following authorization, detailed site investigation and design be made of the projects for the purpose of accurately defining the project lands required; that subsequently, advance acquisition be made of such title to such lands as may be required to preserve the site against incompatible developments; and that the Secretary of the Army be authorized to participate in the construction or reconstruction of transportation and utility facilities in advance of project construction, as required to preserve such areas from encroachments and avoid increased costs for relocations; and

m. That construction of any one of the proposed improvements may be undertaken independently of the others whenever funds are available and the prescribed local cooperation has been furnished; and

**7. Projects to be Considered for Future Authorization.** That the following projects be considered for authorization only after additional studies and recommendations by the Secretary of the Army:

Stannard Reservoir, Genesee River, New York  
Logan Reservoir, Clear Creek, Hocking River Basin, Ohio  
St. Petersburg Reservoir, Clarion River, Pennsylvania

In regard to Stannard and Logan Reservoirs, I recommend:

a. For Stannard Reservoir that the current study of the Genesee River Basin by the Corps of Engineers include a determination of the reservoir storage needed to fulfill the water supply needs of the projected industrial development in the project area as well as the magnitude of the discharge required to mitigate any resulting deterioration in the quality of the water available for downstream recreational use.

b. For Logan Reservoir that the current Central Ohio Survey by the Corps of Engineers include a study of the economic and environmental effects of an alternative upstream site and the preservation of the Clear Creek Gorge to prevent undesirable private development. The study should also identify the alternative measures that can be undertaken to fulfill the purposes served by the reservoir.

St. Petersburg Reservoir will be considered for authorization upon receipt of the recommendation of the Secretary of the Interior in regard to the designation of the Clarion River as a wild, scenic, or recreation river as directed in Section 5 of the Wild and Scenic Rivers Act.

8. **Acid Mine Drainage Abatement Program for the Clarion River Basin.** Recognizing that a pollution abatement program as an environmental feature for the Clarion River Basin generally below Cook Forest State Park is necessary with or without the impoundment of the St. Petersburg Reservoir project, I recommend that the Corps of Engineers be authorized to undertake a program for the abatement of acid mine drainage in the Clarion River Basin, currently estimated at \$16.7 million, and that non-Federal interests provide the Secretary of the Army with assurances that the acid mine drainage abatement program will be coordinated with other actions taken to improve the quality of the water in the Clarion River.

9. **Tug Fork Flood Control Needs.** The long history of flooding in the Tug Fork Valley of the Big Sandy River Basin, Kentucky and West Virginia, has caused chronic suffering of its people and a deterioration of its economy. In the past the area has made important contributions to the development of the Appalachian Region and to the nation. The Lower Knox Creek Reservoir, which is presented in this report, would provide only limited flood protection, but it lacks economic justification at this time. Accordingly, I recommend that the innovative flood damage reduction program, consisting of residential flood-proofing and complementary local protection projects authorized in Section 224 of the Flood Control Act of 1970 (PL 91-611), be initiated with dispatch and that the Secretary of the Army, acting through the Chief of Engineers, be authorized to design a similar program for the entire Tug Fork Valley. Prior to the request of funds for construction, the Secretary of the Army will submit a report, to the Office of Management and Budget and to the Public Works and Appropriations Committees of Congress, concerning the benefits and costs of any proposed works and recommendations concerning the sharing of costs by Federal and non-Federal interests.

10. **Deauthorization of the Salyersville Levee.** The existing local protection project for Salyersville, Kentucky, authorized by Section 3 of the Act approved August 18, 1941, PL 288, 77th Congress, will be replaced by the program proposed in this report; therefore, I recommend deauthorization of the 1941 project.

11. **Comprehensive Land-Use Planning--A Demonstration Project.** To achieve the economic objectives of the plan presented herein, local interests must develop a definite program for contacting and encouraging new industries to locate in the region. An integral part of any such program is a comprehensive land-use plan. Such a plan would describe the scarce resources, including land and labor, which would be consumed by each industry or firm therein. Accordingly I recommend that the Royalton Reservoir-Salyersville development plan be designated as a demonstration project. The project should receive priority attention, following approval of the actions to be taken by local interests set forth in paragraph 6(a), with a view toward achieving the accelerated funding necessary to test the concepts upon which the project is founded. This recommendation in no way alters the need to pursue the development and implementation of other high priority projects recommended herein.

*Stanley R. Resor*

Stanley R. Resor  
Secretary of the Army

April 1971



## II. VIEWS OF THE FEDERAL AGENCIES



DEPARTMENT OF AGRICULTURE  
OFFICE OF THE SECRETARY  
WASHINGTON, D. C. 20250

July 27 1970

Honorable Robert E. Jordan III  
Special Assistant to  
the Secretary of the Army

Dear Mr. Jordan:

This is in reply to your letter of April 9, 1970, transmitting for our review and comment the proposed report of the Secretary of the Army on "Development of Water Resources in Appalachia." This report is based on studies prepared by the Office of Appalachian Studies, U.S. Army Corps of Engineers.

The Department appreciates the opportunity of participating in the study of water and related land resources of the region and in the coordination achieved through the Water Development Coordinating Committee for Appalachia. We believe the general plan developed and outlined on pages 2, 3, and 4 of your proposed report, when carried out, would meet the principal objective of the study to expand economic opportunities throughout the region, thus enhancing the welfare of its people. The general plan includes measures to be carried out by the State of Pennsylvania, the Department of Agriculture, the Department of the Army, and the Tennessee Valley Authority at a total cost of \$2,741 million. Of this amount, \$1,802 million involves programs carried out by this Department. Included are upstream watershed projects, \$506 million; land treatment measures, \$513 million; and National Forests, \$783 million. Of this total USDA program the highest priority was assigned to 42 upstream watershed projects which investigations showed to have considerable developmental promise. The cost of these projects is estimated at \$138 million.

It has been our understanding from the beginning of this cooperative planning effort that the study was to be a joint undertaking and the selection of the early-action plan to be a joint determination in keeping with the objectives of the Act. We feel that this has been accomplished by the Office of Appalachian Studies and the State Conservationist, Soil Conservation Service, West Virginia, who was the Department of Agriculture representative.

During the last several years we have participated in a number of cooperative and joint studies with the Corps of Engineers in addition to the Appalachian Water Resource Survey. Examples are the Potomac, Bayou Bartholomew, and the Poteau River Basin studies. In each of the other three studies named, as in the Appalachian Water Resource Survey, the field investigation staffs of each of our agencies have developed plans which identified structural and project elements which must be carried out concurrently if the expected

Robert E. Jordan III

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benefits actually are to accrue. In many instances some of the upstream and mainstem developments have been interrelated and interdependent. In none of these instances has the report provided for joint or concurrent implementation. The result has been that, while we had good coordination during planning and have proposed complementary project developments which would be in the best interests of the concerned people, piecemeal implementation through different authorities has failed to produce the desired results. Concurrent implementation of interrelated and interdependent elements has not occurred. It is quite evident that a plan is no better than the means of carrying it out.

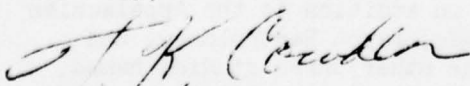
The 42 upstream watersheds selected for early action are needed to provide water-related goods and services and to stimulate economic growth. Sixteen of these are directly related to growth centers and would be justified primarily through induced economic activity. Under current budgetary, policy, and operating constraints, all these watershed projects could not be authorized and implemented through the Watershed Protection and Flood Prevention Program within a time frame which would accomplish the objectives of this study and the Appalachian Regional Development Act.

We feel very strongly that this report should provide a basis and a means whereby the needed projects and measures could be carried out to accomplish the stated objectives of the Act. It seems desirable also that provisions be made for carrying out the apparent intent of the Congress to stimulate economic activity as a means of enhancing the welfare of the people of this region in the immediate future. In order to accomplish this, the report should recommend authorization for the Secretary of Agriculture to proceed with the detailed planning and implementation of these 42 potential watershed projects within the next 10 to 15 years. It is understood that the rate at which these developments would be accomplished would be dependent upon the level of funding provided through annual appropriation. Such a recommendation would be consistent with the recommendations included for the nine Corps of Engineers projects and the two proposed Tennessee Valley Authority projects.

Our recommendation is based on the need for a coordinated region-wide approach to water and related land resource development. The need and justification for this approach is shown in the analysis in Attachment 1. Additional comments and suggestions are included in Attachment 2.

Thank you for the opportunity to review this report.

Sincerely,



Robert E. Jordan III  
Assistant Secretary

Attachments

ATTACHMENT 1

AN EARLY ACTION PROGRAM FOR APPALACHIAN WATER RESOURCES DEVELOPMENT

A Joint Analysis by:

DEPARTMENT OF AGRICULTURE

DEPARTMENT OF THE ARMY

7 July 1970



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## I. INTRODUCTION

### The Need for a System of Priorities

The Secretary of the Army in his proposed report on the development of water resources in Appalachia highlighted the need to establish a system of priorities as the basis for implementation of the general plan formulated for Appalachia. More specifically, he said:

The costs of the water and related projects and programs included as part of the general plan are in excess of \$2.4 billion. Recognizing that these projects must compete not only with water resource investments which might be undertaken outside the Appalachian Region, but that they must also compete with other public programs in Appalachia, it is unlikely that funds of this magnitude will be fully available in the near future. For these reasons it is imperative that a priority system be established for the implementation of the general plan, the specific projects recommended herein for early action, and previously authorized projects. In developing project priorities, it is suggested that the Appalachian Regional Commission, in coordination with others, first carefully assess the nature of each recommended project and its role in Appalachia, consider alternative solutions and study the phasing of each project to assure consonance with complementary public and private actions.<sup>1/</sup>

The purpose of this paper is to provide the Appalachian Regional Commission with the joint views of the Departments of Agriculture and the Army on priorities for water resource projects. The focus will be on the water resource projects which should be initiated in the next 10-15 years, the so-called "early action program". It should be emphasized that the analysis presented in this paper constitutes the initial step in formulating a regional water resources program for the Appalachian Region. Although tentative, the program hopefully will serve as a basis for a continuing assessment and discussion of priorities within the region.

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<sup>1/</sup> Department of the Army, Development of Water Resources in Appalachia: Proposed Report of the Secretary of the Army, Washington, D. C., 9 April 1970, p. 2.

The Case for an Appalachian Regional Water Resources Budget

The comprehensive water and related land resource plan recommended in the proposed report of the Secretary of the Army is the result of cooperative effort of the Army Corps of Engineers, Office of Appalachian Studies, the Appalachian States, the Departments of Agriculture, Commerce, Health, Education, and Welfare, Interior, Transportation, the Federal Power Commission, the Tennessee Valley Authority, and the Appalachian Regional Commission. Considerable time, effort, and study funds have been devoted to integrating the different projects and programs of these agencies into the general plan for Appalachia. In some instances, therefore, a project or program of one agency will produce its greatest positive effects on the natural and economic environment of the region only if there is joint and simultaneous implementation of related investments by other agencies, whether Federal, state, or local. But the probability of joint and simultaneous implementation of regional plans, upon which the success of plans such as that for Appalachia is predicated, rapidly diminishes with each successive review by higher authority since the emphasis in such reviews normally has been on the competition among different elements within a given agency's program. Consequently it is possible that a state, a private firm therein, or another Federal agency might accord a high priority to a particular Army or Agriculture project only to have either of the two agencies accord a low priority to the same project. The end result could be that critical investments, needed to produce the projected economic benefits, will either be made prematurely or will be made in an area in which no complementary Army or Agriculture project will be forthcoming in the foreseeable future.

One way to insure the integrity of the regional plan for Appalachia, as it moves from planning through the authorization and appropriation processes, is to have each concerned agency examine the priority to be accorded the Appalachian portion of its program relative to the program for other regions of the nation. The case for such regional priority-setting or regional budgeting, then, is that all the alternatives available for the development of a particular region can be viewed simultaneously, permitting tradeoffs among different programs and highlighting which investment is eliminated when another is placed in the regional budget. This would afford local planning agencies, the Governors of states, and Federal-State planning groups such as the Appalachian Regional Commission the opportunity to see precisely how they might best utilize their limited resources in complementing the programs of Federal agencies.

## II. REGIONAL BUDGET ANALYSIS

### The Relevance of a Regional Budget Constraint

In the development of a joint Agriculture-Army water resources program for the Appalachian Region, the most important step is to establish a regional budget constraint. This is true because the magnitude of this constraint is an explicit statement of the priority to be accorded the Appalachian Region relative to the other regions of the United States in regard to the fulfillment of water resource needs.

To propose a rational plan for the development of water and related land resources of the Appalachian or any other region without giving explicit consideration to a budget constraint implies that there is an



infinite amount of resources available for funding water resources projects. This, of course, is not the case. This assumption, nevertheless, has been implicit in recommendations for some "early action programs", that is, the projects and programs which should be initiated in the next 10-15 years. In light of this, the first step of this analysis was to identify explicit 10 year budget constraints for the water resource programs of the Soil Conservation Service of the Department of Agriculture and of the Army Corps of Engineers' Civil Works Program of the Department of the Army.

Magnitude of Regional Budget Constraints for Early Action

This analysis is based on a 10 year water resources budget for the Appalachian Region of \$1,866 million, \$436 million for the Department of Agriculture and \$1,430 million for the Department of the Army. These amounts are divided between two five-year planning periods as follows:

TABLE 1  
WATER RESOURCES BUDGET FOR APPALACHIA  
(in millions)

<u>Planning Period</u>		<u>Department of Agriculture</u>	<u>Department of the Army</u>
Phase I	(1st 5 years)	151.0	497.0
Phase II	(2nd 5 years)	285.0	933.0
Total	(10 years)	436.0	1,430.0

Water resources projects which cannot be funded within these budget constraints are placed in a third planning period, Phase III, and it is assumed they will be built some time after the 10-year planning period.

The regional water resources budget for Appalachia shown in Table 1 was derived as follows. The Department of the Army's FY 1971-75 Water Resource Investment Program for the 19 major regions of the nation totals \$5.5 billion. The intensity of the water resources needs of the Appalachian Region relative to the other regions amounts to 13 percent of the total. Therefore, the 10-year budget for Appalachia is 13 percent of \$11.0 billion ( $.13 \times 2 \times 5.5$ ) or \$1,430 million. In the five-year period FY 1966-70 the total cost of Civil Works projects started in the Appalachian Region amounted to \$398 million. In Phase I, the first five-year planning period, it was assumed that the regional budget for the Department of Army would amount to 25 percent more than the total cost of new starts in FY 1966-70 ( $1.25 \times 398$ ) or \$497 million. This is equivalent to a 4.5 percent annual increase in the program over the five year period. Similarly, the Phase I budget for the Department of Agriculture represents a 25 percent increase over the total cost of structural measures in watershed projects authorized for operations in Appalachia for the five-year period FY 1962-67 ( $1.25 \times 121$ ) or \$151 million. In order to assure equitable treatment with the Department of the Army over the entire 10 year planning period, the Department of Agriculture's 10 year budget of \$436 million bears the same proportion to the FY 1962-67 level of funding in Appalachia of \$121 million as does the Department of Army's \$1,430 million budget to the FY 1966-70 level of \$398 million. This is the same as a 7 percent annual increase in the program over the 10 year period.

### Allocation of the Regional Budget Among Sub-Regions

The designation of a budget for the Appalachian Region, in itself, will not suffice for the decision as to which of the many available water resource projects, authorized and unauthorized, should be started during the next 10 years, since the total cost of available projects far exceeds the \$1.9 billion budget designated for Appalachia. For example, some 339 upstream watershed projects of the Department of Agriculture having a total estimated cost of \$3/4 billion could be initiated over the next 10 years in Appalachia, while 82 Civil Works projects of the Department of the Army having a total estimated cost of \$2.6 billion also could be initiated in the next 10 years. Clearly, a system of priorities is necessary in order to make the decision as to which projects are built and which are not in the next 10 years.

The allocation of the 10 year budget among the 10 water sub-regions of Appalachia is the basis of the system of priorities used by both departments in this analysis. The choice of the 10 water sub-regions as the basic decision-making unit follows directly from the planning procedures employed by the Army Corps of Engineers' Office of Appalachian Studies in conjunction with the other Federal and state agencies. The physical, economic, and demographic characteristics of Appalachia vary among sub-regions, and in response to this variation a water and related land resource plan has been formulated for each of the 10 sub-regions.<sup>2/</sup> Based on the data contained in each of the sub-regional plans, a

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<sup>2/</sup> See, in this connection, Department of the Army, Office of Appalachian Studies, Development of Water Resources in Appalachia, Main Report: Part I - Summary Report, December 1969, Preface, p. xiii. See also Main Report: Part II - Vols, 3, 4 and 5 for a description of the sub-regional plans.

recommended allocation of the 10 year regional budget in percent, both for the Department of Agriculture and the Department of the Army, was decided upon. These recommended allocations are shown, respectively, in columns (7) and (8) of Table 2. Also shown in Table 2, in columns (1) through (6), are sub-regional allocations based on various criteria. For example, columns (1) through (4) show allocations based on the relative intensity of water resource needs among the 10 sub-regions. Columns (5) and (6), on the other hand, show allocations based on sub-regional population and unemployment. In deriving the recommended allocations, emphasis was given to the allocations based on unemployment (column 6) and estimated flood damage, considering the upstream damages (column 2) in the case of the Department of Agriculture and total damages (column 1) in the case of the Department of the Army.

The recommended allocations shown in columns (7) and (8) are, overall, quite close, such differences as there are stemming from (1) the different weights accorded by the two agencies to the criteria in Table 2, and (2) whether or not the agency has a program in a given sub-region. An example of this last point is found in the recommended allocation of zero percent for the Department of the Army's program in Sub-Region J, whereas that for the same sub-region for Department of Agriculture is 13 percent. The Army has no program of new investments in the Tennessee Valley, which is the area covered by Sub-Region J.

#### Sub-Regional Allocations and Project Priorities

The selection of those water resource projects which should be initiated for construction over the next 10 years involved these steps, performed individually for each agency.



TABLE 2  
APPALACHIAN REGION  
TEN-YEAR REGIONAL BUDGET FOR EARLY ACTION  
SUB-REGIONAL ALLOCATIONS BASED ON VARIOUS CRITERIA  
(In Percent)

Water Sub-Region	Estimated Flood Damage		Additional Water Supply 2020 (3)	Water Based Recreation 2020 (4)	Population 1960 (5)	Unemployment 1960 (6)	Recommend Allocation	
	Total (1)	Upstream (2)					Agriculture (7)	Army (8)
SUB-REGION A	3	1	6	4	5	8	4	5
SUB-REGION B	28	7	3	14	13	13	14	12
SUB-REGION C	1	1	0	1	*	*	1	1
SUB-REGION D	4	7	11	10	7	6	8	10
SUB-REGION E	19	41	15	15	14	12	20	17
SUB-REGION F	13	6	11	40	26	30	18	30
SUB-REGION G	28	15	52	12	16	17	16	20
SUB-REGION H	1	3	1	1	2	1	2	2
SUB-REGION I	*	6	*	3	3	2	4	3
SUB-REGION J	3	14	1/	1/	15	10	13	0
APPALACHIAN REGION	100	100	100	100	100	100	100	100

\* 0.5 or less

1/ Data not available

1. The allocation of the 10 year and Phase I regional budgets among the 10 sub-regions based on the percentage allocations shown in Table 2, columns (7) and (8);

2. The ranking of all available water resource projects within each sub-region in priority order; the priority in general, based on assessments by agency officials in the field;

3. The selection of the highest priority projects within each sub-region until the Phase I budget for the sub-region was exhausted;

4. The computation of sub-regional allocations for Phase II of the early action program by subtracting the total cost of projects selected in each sub-region in Phase I, that is, the "commitment" for Phase I from the 10 year allocation for the sub-region;

5. The selection of the remaining projects within each sub-region until exhaustion of Phase II budget for the sub-region; and

6. The listing, under Phase III, of those projects which cannot be funded within the 10 year period given the regional budget constraints used in this analysis.

The sub-regional allocations and commitments resulting from the above steps are summarized, for the Departments of Agriculture and the Army respectively, in Tables 3 and 4 on the following pages, while the specific water resource projects selected for inclusion in the 10 year regional water resources program for Appalachia are summarized, respectively, in Tables 5 and 6, Part IV of this paper.

One aspect of Tables 3 and 4 should be elaborated upon. It has to do with the differences between the Phase I allocation and commitment shown in columns (3) and (4) of these tables. Table 3, for example, shows that whereas the Phase I allocation for Sub-Region E is \$30.2 million, this sub-region received only one-third this amount or \$10.7 million. This is due to the fact that the Department of Agriculture accorded highest priority to the 42 upstream watershed projects, including 16

TABLE 3  
APPALACHIAN REGION  
SUB-REGIONAL ALLOCATIONS AND COMMITMENTS: DEPARTMENT OF AGRICULTURE  
(Dollar amounts in millions)

Water Sub-Region	10-Year Allocation		Phase I		Phase II	
	Early Action Program (1)	(2)	Allocation (3)	Commitment (4)	Allocation (5)	Commitment (6)
SUB-REGION A	4%	\$ 17.4	\$ 6.0	\$ 1.5	\$ 15.9	\$ 18.3
SUB-REGION B	14	61.0	21.2	17.4	43.6	43.3
SUB-REGION C	1	4.4	1.5	2.7	1.7	2.0
SUB-REGION D	8	34.9	12.1	6.9	28.0	24.7
SUB-REGION E	20	87.2	30.2	10.7	76.5	80.8
SUB-REGION F	18	78.5	27.2	60.5	18.0	17.6
SUB-REGION G	16	69.8	24.2	33.0	36.8	37.3
SUB-REGION H	2	8.7	3.0	2.5	6.2	2.7
SUB-REGION I	4	17.4	6.0	6.2	11.2	10.0
SUB-REGION J	13	56.7	19.6	8.9	47.8	21.5
APPALACHIAN REGION	100	436.0	151.0	150.3	285.7	258.2

TABLE 4  
APPALACHIAN REGION  
SUB-REGIONAL ALLOCATIONS AND COMMITMENTS: DEPARTMENT OF THE ARMY  
(Dollar amounts in millions)

<u>Water Sub-Region</u>	<u>10-Year Allocation</u>		<u>Phase I</u>		<u>Phase II</u>	
	<u>Early Action Program</u> (1)	<u>(2)</u>	<u>Allocation</u> (3)	<u>Commitment</u> (4)	<u>Allocation</u> (5)	<u>Commitment</u> (6)
SUB-REGION A	5%	\$ 71.5	\$ 24.8	\$ 0	\$ 71.5	\$ 59.2
SUB-REGION B	12	171.6	59.6	57.3	114.3	106.9
SUB-REGION C	1	14.3	5.0	0	14.3	23.5
SUB-REGION D	10	143.0	49.7	27.8	115.2	157.6
SUB-REGION E	17	243.1	84.5	48.9	194.2	210.0
SUB-REGION F	30	429.0	149.1	196.8	232.2	156.4
SUB-REGION G	20	286.0	99.5	123.4	162.6	238.3
SUB-REGION H	2	28.6	9.9	51.0	- 22.4	0
SUB-REGION I	3	42.9	14.8	6.1	36.8	0
SUB-REGION J	0	0	0	0	0	0
APPALACHIAN REGION	100	1,430.0	497.0	511.2	918.8	952.0



projects having special developmental promise, which were highlighted by the Department in its studies of the Appalachian Region. And the distribution of these 42 projects works to the disadvantage of water resource development in Sub-Region E during Phase I.

Similar differences between Phase I allocations and commitments exist with regard to the Department of the Army program. Table 4, for example, shows that whereas the Phase I allocation for Sub-Region E is \$84.5 million, this sub-region received only slightly more than one-half this amount or \$48.9 million. This difference can come about in either of two ways. One is the fact that often the right types of projects are not available in a given sub-region at the time they are needed. This illustrates the point made in policy issue number 5 in the proposed report of the Secretary of the Army, namely that existing statutory authorizations either preclude, or often are interpreted narrowly to preclude, meaningful explorations of alternatives. Some alternatives which should have been studied in more detail in the Appalachian Water Resources Survey include the construction of regional waste water treatment systems, the design and installation of distribution systems for municipal and industrial water supply, and flood-proofing. Another explanation for the difference between the allocation and commitment for Sub-Region E is "project lumpiness". Civil Works projects, unlike upstream watershed projects, do not come in discrete bundles of uniform size. Thus the choice in Sub-Region E was to select, in addition to Dalton Reservoir and Montgomery, Alabama, the next highest priority project costing \$210 million and thus exceed the Phase I allocation by \$174.4 million or to under-subscribe the allocation, which

is what was done. This decision, as in the case of Department of Agriculture, also works to the disadvantage of Sub-Region E in Phase I.

It should be noted that the priorities among projects within sub-regions used in this paper are based largely on assessments made by Departmental officials working at the field level who are responsible for the programs in the various sub-regions. In making these assessments, officials of the Department of Agriculture had available, among other information, an analysis which assigned each upstream watershed project a numerical index--the higher the index, the more favorable the potential contribution of the project to economic growth--based on these kinds of factors: proximity to airports, railroads, Interstate or Appalachian Corridor Highways, and to urban centers; potential size of the labor pool in the project area; the nature of the project, whether multiple-purpose or not; and quality and availability of land for development. Department of the Army officials based their assessments of project priorities, among other information, on the results of benefit/cost analysis, including in some cases an index of the potential contribution of the project to regional employment.

### III. SUGGESTIONS FOR FUTURE ACTIONS

#### Annual Updating of the Regional Water Resources Program

The regional budget formulated in this paper for the water resource programs of the Departments of Agriculture and the Army will be most useful to the Appalachian Regional Commission and others concerned with investment decisions in Appalachia if it is reviewed and revised each year. Annual updating of the regional program is necessary for several reasons:

to reflect changes in national, regional, and local priorities; to take advantage of improved techniques of analysis and of updated data, such as that in the 1970 census; and to reflect changes in the availability and priority of the individual projects within the 10 water sub-regions.

#### Consideration of Sub-Regional Allocations

A basic premise of this paper is that the system of priorities established in the planning process ought to be reinforced as the regional plan moves through the authorization and appropriation processes toward implementation. One way in which this can be done is through consideration of sub-regional allocations such as those derived in this paper and summarized in Table 2. At the present time Congress periodically acts on the River Basin Monetary Authorizations Bill which establishes the limits on annual appropriations within specified river basins.<sup>3/</sup> If this program is to be extended to all regions, future water resource plans should follow the advances made in the Appalachian Water Resources Report; that is, each plan would contain definitive criteria for establishing and recommending sub-regional allocations.

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<sup>3/</sup> U. S. Congress, House of Representatives, Subcommittee on Flood Control of the Committee on Public Works, Hearing: River Basin Monetary Authorization - 1969, 91st Cong., 1st Sess., December 9, 1969. Honorable Robert E. Jones, Chairman of the Sub-Committee, points out on page 1 that monetary authorizations "...give the Congress opportunity to review and control the rate of accomplishment of the basin plans..."

#### IV. A PROPOSED REGIONAL WATER RESOURCES PROGRAM FOR APPALACHIA



TABLE 5  
APPALACHIAN REGION  
EARLY ACTION PROGRAM - DEPARTMENT OF AGRICULTURE  
(Dollar amounts in thousands)

Sub-Region 1 (Cont'd)			Sub-Region 2 (Cont'd)			Sub-Region 3 (Cont'd)			Sub-Region 4 (Cont'd)			Sub-Region 5 (Cont'd)			Sub-Region 6 (Cont'd)			Sub-Region 7 (Cont'd)			Sub-Region 8 (Cont'd)			Sub-Region 9 (Cont'd)			Sub-Region 10 (Cont'd)			Sub-Region 11 (Cont'd)			Sub-Region 12 (Cont'd)			Sub-Region 13 (Cont'd)			Sub-Region 14 (Cont'd)			Sub-Region 15 (Cont'd)			Sub-Region 16 (Cont'd)			Sub-Region 17 (Cont'd)			Sub-Region 18 (Cont'd)			Sub-Region 19 (Cont'd)			Sub-Region 20 (Cont'd)			Sub-Region 21 (Cont'd)			Sub-Region 22 (Cont'd)			Sub-Region 23 (Cont'd)			Sub-Region 24 (Cont'd)			Sub-Region 25 (Cont'd)			Sub-Region 26 (Cont'd)			Sub-Region 27 (Cont'd)			Sub-Region 28 (Cont'd)			Sub-Region 29 (Cont'd)			Sub-Region 30 (Cont'd)			Sub-Region 31 (Cont'd)			Sub-Region 32 (Cont'd)			Sub-Region 33 (Cont'd)			Sub-Region 34 (Cont'd)			Sub-Region 35 (Cont'd)			Sub-Region 36 (Cont'd)			Sub-Region 37 (Cont'd)			Sub-Region 38 (Cont'd)			Sub-Region 39 (Cont'd)			Sub-Region 40 (Cont'd)			Sub-Region 41 (Cont'd)			Sub-Region 42 (Cont'd)			Sub-Region 43 (Cont'd)			Sub-Region 44 (Cont'd)			Sub-Region 45 (Cont'd)			Sub-Region 46 (Cont'd)			Sub-Region 47 (Cont'd)			Sub-Region 48 (Cont'd)			Sub-Region 49 (Cont'd)			Sub-Region 50 (Cont'd)			Sub-Region 51 (Cont'd)			Sub-Region 52 (Cont'd)			Sub-Region 53 (Cont'd)			Sub-Region 54 (Cont'd)			Sub-Region 55 (Cont'd)			Sub-Region 56 (Cont'd)			Sub-Region 57 (Cont'd)			Sub-Region 58 (Cont'd)			Sub-Region 59 (Cont'd)			Sub-Region 60 (Cont'd)			Sub-Region 61 (Cont'd)			Sub-Region 62 (Cont'd)			Sub-Region 63 (Cont'd)			Sub-Region 64 (Cont'd)			Sub-Region 65 (Cont'd)			Sub-Region 66 (Cont'd)			Sub-Region 67 (Cont'd)			Sub-Region 68 (Cont'd)			Sub-Region 69 (Cont'd)			Sub-Region 70 (Cont'd)			Sub-Region 71 (Cont'd)			Sub-Region 72 (Cont'd)			Sub-Region 73 (Cont'd)			Sub-Region 74 (Cont'd)			Sub-Region 75 (Cont'd)			Sub-Region 76 (Cont'd)			Sub-Region 77 (Cont'd)			Sub-Region 78 (Cont'd)			Sub-Region 79 (Cont'd)			Sub-Region 80 (Cont'd)			Sub-Region 81 (Cont'd)			Sub-Region 82 (Cont'd)			Sub-Region 83 (Cont'd)			Sub-Region 84 (Cont'd)			Sub-Region 85 (Cont'd)			Sub-Region 86 (Cont'd)			Sub-Region 87 (Cont'd)			Sub-Region 88 (Cont'd)			Sub-Region 89 (Cont'd)			Sub-Region 90 (Cont'd)			Sub-Region 91 (Cont'd)			Sub-Region 92 (Cont'd)			Sub-Region 93 (Cont'd)			Sub-Region 94 (Cont'd)			Sub-Region 95 (Cont'd)			Sub-Region 96 (Cont'd)			Sub-Region 97 (Cont'd)			Sub-Region 98 (Cont'd)			Sub-Region 99 (Cont'd)			Sub-Region 100 (Cont'd)			Sub-Region 101 (Cont'd)			Sub-Region 102 (Cont'd)			Sub-Region 103 (Cont'd)			Sub-Region 104 (Cont'd)			Sub-Region 105 (Cont'd)			Sub-Region 106 (Cont'd)			Sub-Region 107 (Cont'd)			Sub-Region 108 (Cont'd)			Sub-Region 109 (Cont'd)			Sub-Region 110 (Cont'd)			Sub-Region 111 (Cont'd)			Sub-Region 112 (Cont'd)			Sub-Region 113 (Cont'd)			Sub-Region 114 (Cont'd)			Sub-Region 115 (Cont'd)			Sub-Region 116 (Cont'd)			Sub-Region 117 (Cont'd)			Sub-Region 118 (Cont'd)			Sub-Region 119 (Cont'd)			Sub-Region 120 (Cont'd)			Sub-Region 121 (Cont'd)			Sub-Region 122 (Cont'd)			Sub-Region 123 (Cont'd)			Sub-Region 124 (Cont'd)			Sub-Region 125 (Cont'd)			Sub-Region 126 (Cont'd)			Sub-Region 127 (Cont'd)			Sub-Region 128 (Cont'd)			Sub-Region 129 (Cont'd)			Sub-Region 130 (Cont'd)			Sub-Region 131 (Cont'd)			Sub-Region 132 (Cont'd)			Sub-Region 133 (Cont'd)			Sub-Region 134 (Cont'd)			Sub-Region 135 (Cont'd)			Sub-Region 136 (Cont'd)			Sub-Region 137 (Cont'd)			Sub-Region 138 (Cont'd)			Sub-Region 139 (Cont'd)			Sub-Region 140 (Cont'd)			Sub-Region 141 (Cont'd)			Sub-Region 142 (Cont'd)			Sub-Region 143 (Cont'd)			Sub-Region 144 (Cont'd)			Sub-Region 145 (Cont'd)			Sub-Region 146 (Cont'd)			Sub-Region 147 (Cont'd)			Sub-Region 148 (Cont'd)			Sub-Region 149 (Cont'd)			Sub-Region 150 (Cont'd)			Sub-Region 151 (Cont'd)			Sub-Region 152 (Cont'd)			Sub-Region 153 (Cont'd)			Sub-Region 154 (Cont'd)			Sub-Region 155 (Cont'd)			Sub-Region 156 (Cont'd)			Sub-Region 157 (Cont'd)			Sub-Region 158 (Cont'd)			Sub-Region 159 (Cont'd)			Sub-Region 160 (Cont'd)			Sub-Region 161 (Cont'd)			Sub-Region 162 (Cont'd)			Sub-Region 163 (Cont'd)			Sub-Region 164 (Cont'd)			Sub-Region 165 (Cont'd)			Sub-Region 166 (Cont'd)			Sub-Region 167 (Cont'd)			Sub-Region 168 (Cont'd)			Sub-Region 169 (Cont'd)			Sub-Region 170 (Cont'd)			Sub-Region 171 (Cont'd)			Sub-Region 172 (Cont'd)			Sub-Region 173 (Cont'd)			Sub-Region 174 (Cont'd)			Sub-Region 175 (Cont'd)			Sub-Region 176 (Cont'd)			Sub-Region 177 (Cont'd)			Sub-Region 178 (Cont'd)			Sub-Region 179 (Cont'd)			Sub-Region 180 (Cont'd)			Sub-Region 181 (Cont'd)			Sub-Region 182 (Cont'd)			Sub-Region 183 (Cont'd)			Sub-Region 184 (Cont'd)			Sub-Region 185 (Cont'd)			Sub-Region 186 (Cont'd)			Sub-Region 187 (Cont'd)			Sub-Region 188 (Cont'd)			Sub-Region 189 (Cont'd)			Sub-Region 190 (Cont'd)			Sub-Region 191 (Cont'd)			Sub-Region 192 (Cont'd)			Sub-Region 193 (Cont'd)			Sub-Region 194 (Cont'd)			Sub-Region 195 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(Cont'd)			Sub-Region 234 (Cont'd)			Sub-Region 235 (Cont'd)			Sub-Region 236 (Cont'd)			Sub-Region 237 (Cont'd)			Sub-Region 238 (Cont'd)			Sub-Region 239 (Cont'd)			Sub-Region 240 (Cont'd)			Sub-Region 241 (Cont'd)			Sub-Region 242 (Cont'd)			Sub-Region 243 (Cont'd)			Sub-Region 244 (Cont'd)			Sub-Region 245 (Cont'd)			Sub-Region 246 (Cont'd)			Sub-Region 247 (Cont'd)			Sub-Region 248 (Cont'd)			Sub-Region 249 (Cont'd)			Sub-Region 250 (Cont'd)			Sub-Region 251 (Cont'd)			Sub-Region 252 (Cont'd)			Sub-Region 253 (Cont'd)			Sub-Region 254 (Cont'd)			Sub-Region 255 (Cont'd)			Sub-Region 256 (Cont'd)			Sub-Region 257 (Cont'd)			Sub-Region 258 (Cont'd)			Sub-Region 259 (Cont'd)			Sub-Region 260 (Cont'd)			Sub-Region 261 (Cont'd)			Sub-Region 262 (Cont'd)			Sub-Region 263 (Cont'd)			Sub-Region 264 (Cont'd)			Sub-Region 265 (Cont'd)			Sub-Region 266 (Cont'd)			Sub-Region 267 (Cont'd)			Sub-Region 268 (Cont'd)			Sub-Region 269 (Cont'd)			Sub-Region 270 (Cont'd)			Sub-Region 271 (Cont'd)			Sub-Region 272 (Cont'd)			Sub-Region 273 (Cont'd)			Sub-Region 274 (Cont'd)			Sub-Region 275 (Cont'd)			Sub-Region 276 (Cont'd)			Sub-Region 277 (Cont'd)			Sub-Region 278 (Cont'd)			Sub-Region 279 (Cont'd)			Sub-Region 280 (Cont'd)			Sub-Region 281 (Cont'd)			Sub-Region 282 (Cont'd)			Sub-Region 283 (Cont'd)			Sub-Region 284 (Cont'd)			Sub-Region 285 (Cont'd)			Sub-Region 286 (Cont'd)			Sub-Region 287 (Cont'd)			Sub-Region 288 (Cont'd)			Sub-Region 289 (Cont'd)			Sub-Region 290 (Cont'd)			Sub-Region 291 (Cont'd)			Sub-Region 292 (Cont'd)			Sub-Region 293 (Cont'd)			Sub-Region 294 (Cont'd)			Sub-Region 295 (Cont'd)			Sub-Region 296 (Cont'd)			Sub-Region 297 (Cont'd)			Sub-Region 298 (Cont'd)			Sub-Region 299 (Cont'd)			Sub-Region 300 (Cont'd)			Sub-Region 301 (Cont'd)			Sub-Region 302 (Cont'd)			Sub-Region 303 (Cont'd)			Sub-Region 304 (Cont'd)	
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/ This represents an initial formulation of a regional water resources program for Appalachia. Although tentative, this program and the analysis upon which it is based hopefully will serve as a basis for discussion by the Appalachian Regional Commission and others concerned with investment decisions in Appalachia. It is a flexible program, and will be reviewed and revised only as better data become available and as more information is necessary to reflect changes in water resource needs and objectives, to take advantage of improved data and techniques of analysis, to comply with budgetary considerations, and to reflect changes in the availability and priority of the individual projects within the ten water sub-region.

The 42 upstream water projects designated as "high priority" on page 2 of the proposed report of the Secretary of the Army on the development of water resources in Appalachia are underlined. Those projects marked with an asterisk are considered by the Department of Agriculture to have special developmental emphasis.

TABLE 6  
APPALACHIAN REGION  
EARLY ACTION PROGRAM - DEPARTMENT OF THE ARMY-1/  
(Dollar Amounts in Thousands)

1/ This represents an initial formulation of a regional water resources program for Appalachia. Although tentative, this program and the analysis upon which it is based hopefully will serve as a basis for discussion by the Appalachian Regional Commission and others concerned with investment decisions in Appalachia. It is a flexible program, and should be reviewed and revised each year. Review and revision is necessary to reflect changes in water resource needs and objectives, to take advantage of improved data and techniques of analysis, to comply with budgetary considerations, and to reflect changes in the availability and priority of the individual projects within the ten water sub-regions. The underlined projects are those recommended for early action in the proposed report of the Secretary of the Army on the Development of Water Resources in Appalachia. See pages 9, 10, and 15 of the proposed report of the Secretary.

Attachment 2

ADDITIONAL COMMENTS AND SUGGESTIONS  
PROPOSED REPORT OF THE SECRETARY OF THE ARMY  
on  
DEVELOPMENT OF WATER RESOURCES IN APPALACHIA

1. It is suggested that the following paragraphs be reworded to reflect the following:

a. Page 9. Paragraph 3. "Selected Upstream Watershed Projects. That the Secretary of Agriculture be authorized to proceed with the detailed planning of the forty-two Appalachian upstream watershed projects tabulated on page 1-7-7 of this Summary Report, and to carry out such plans, giving special consideration to the sixteen projects included in this group which preliminary investigations showed to have considerable developmental promise but limited user benefits, and that he submit these watershed work plans to the Congress through the President for consideration, in accordance with the principles and criteria of Public Law 83-566, as amended, and Public Law 89-4."

b. Page 13. Paragraph g(4). "...for the accelerated land treatment measures of the Royalton Reservoir-Salyersville Area plan, assume financial and other responsibilities in accordance with the provisions of The Appalachian Regional Development Act, PL 89-4, Sec. 203."

2. We concur with your recommendation for a pilot study to provide an improved basis for evaluating the economic development effects of water resource development projects. We question, however, that the needed procedural improvement can be developed from a pilot project alone. It is suggested, therefore, that implementation of the Appalachian water development program be accompanied by and contingent on an intensive research effort designed to specify the role and relationship of water and related land in the economic growth process of the Appalachian Region.

3. Some editorial comments are supplied as marginal notes in the attached copy of the report.



**THE ASSISTANT SECRETARY OF COMMERCE**  
Washington, D.C. 20230

**AUG 20 1970**

Mr. Robert E. Jordan, III  
Special Assistant to the Secretary  
of the Army (Civil Functions)  
Department of the Army  
Washington, D.C. 20310

Dear Mr. Jordan:

With reference to your letter dated 9 April 1970, the following comments and recommendations are submitted following a review of the report of study entitled "Development of Water Resources in Appalachia."

The manner in which economic measurement and analysis are used in the Appalachian Study represents a new and promising approach in water resource development. Reference here is to the major role that economic considerations appear to have had in plan formulation in the Appalachian Report. Particular reference is made to the use of the concepts of developmental benchmarks and regionalization. While this use of economic tools greatly enhances the Study, it also points up the need for further development and refinement of these tools. Most of those used in the Study, as well as the economic conclusions drawn from their use, will be at best no more than approximations. Considerable additional work is needed before they can be applied rigorously in water resource planning.

Commerce concurs with the recommendation (Page I-3-4) that "There is a need for a regional transportation plan which would include effective integration of barge, rail, trucking, and air services." The Maritime Administration would like to participate in such planning. The "navigation" aspect of the report is given very light treatment. It is noted, however, that "The Ohio, the Tennessee, and the Black Warrior Rivers have navigation systems serving Appalachia. These waterways have been of economic significance to Appalachia and each generation has modernized them. The Chattahoochee, the Tombigbee, and the Coosa Rivers offer future potential as navigable waterways."

Of particular interest to Commerce, also, is the examination of methods for the reduction of flood damages--non-structural means, namely, flood warning services for the Region. To be sure that this activity

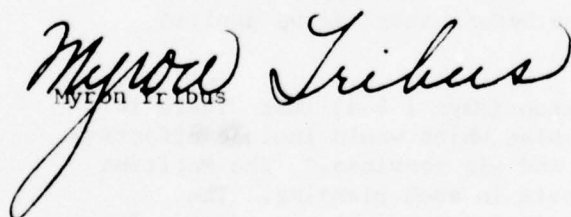


would be given consideration in developing the plan, in early 1968 this service was brought to the attention of the appropriate Corps offices responsible for the assembly of the various Sub-Region Reports. Our review now shows that reports for Regions B, E, F, and I contain good reference, while reports for Regions A, G, and H contain incomplete or poor reference, and for Regions C, D, and J no reference at all.

In Part I of the Main Report, Section II--Influences that Shaped the Plan, Paragraph 18, on Non-structural Solutions, indicates that a number of these measures was considered "...to the extent that they are practical alternatives to the traditional approach offered..." This thought is followed by the statement, "Flood plain management programs based on accurate flood plain information are advocated in all areas of Appalachia to reduce the growing rate of flooding damages." This could stand sharpening to assist the reader by adding "...such as zoning, flood warnings, flood insurance, etc."

A formal flood warning service is not available for all damage centers in the region. Nevertheless, a warning service is a very practical tool for reducing damages and, probably, the only method (not just an alternative) for many communities where protection by water-control structures is not economically feasible. It is unfortunate that the Weather Bureau did not receive funding to participate in the Appalachia Study. Consequently, we have depended upon others involved in this comprehensive study to bring appropriate attention to the role of flood-warning services. The result now, however, is that the Summary Report, Findings, and Conclusions do not contain a single recommendation related to non-structural flood damage reduction measures.

Sincerely,

  
Myron Tribus



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
ENVIRONMENTAL HEALTH SERVICE  
ROCKVILLE, MARYLAND 20852

JUL 23 1970

ENVIRONMENTAL CONTROL  
ADMINISTRATION

Robert E. Jordan, III  
Special Assistant to the  
Secretary of the Army  
Department of the Army  
Washington, D. C. 20201

Dear Mr. Jordan:

This is in reply to your letter of April 9, 1970 requesting comments on the proposed report, "Development of Water Resources in Appalachia."

The Department of Health, Education, and Welfare has served as a member, through its appointed representative, on the Water Development Coordinating Committee for Appalachia. In such capacity, the Department has cooperated with the other participating agencies and has reviewed sections of the report for health aspects considerations.

The Department supports the objectives of an improved economy and environment for Appalachia and has no objections to offer to this report.

Sincerely yours,

*Raymond T. Moore*  
for Raymond T. Moore, M.D.  
Acting Commissioner



## United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

AUG 10 1970

Dear Mr. Secretary:

This replies to your request of April 9, 1970, for our comments on your proposed report entitled "Development of Water Resources in Appalachia."

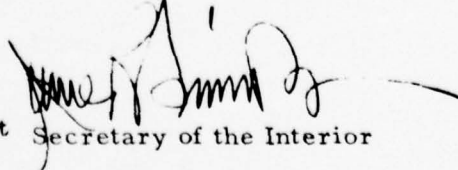
The principal objective of the Appalachian water resource planning, as stated in the Summary Report, is regional economic development. In achieving this worthy objective by implementing the recommended plan of development and making further development studies, we urge that every consideration possible be given to protecting and improving the quality of the environment. Intensive studies of all environmental values were not made as a part of the Water Resources Survey and further attention to these values will be required as additional planning is undertaken.

The proposed report includes recommendations of nine specific projects for authorization for construction as early action elements. The recommended authorization would allow modification of the projects as you deem advisable. We shall expect that as was indicated in the letter from the Chief of Engineers, Lt. Gen. William F. Cassidy, dated February 16, 1968 to the Secretary of the Interior, the Corps of Engineers will confer with all interested Federal and State agencies on any significant changes in project scope.

It should be pointed out that various agencies of the Department of the Interior participated in the study and that at least seven of the volumes contain submissions of these agencies. We concur with your general recommendations and offer the attached comments for your use in the design and operation phases of the plan. If the recommendations we offer are complied with, we have no objection to the proposed report.

We appreciate the opportunity of presenting our views.

Sincerely yours,

  
Assistant Secretary of the Interior

Hon. Stanley R. Resor  
Secretary of the Army  
Washington, D.C. 20310

Enclosure



## United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

DEPARTMENT OF THE INTERIOR  
COMMENTS ON  
THE REPORT OF THE SECRETARY OF THE ARMY ENTITLED:  
"DEVELOPMENT OF WATER RESOURCES IN APPALACHIA"

We find from the report that certain work and studies, including harbor and levee work and watershed projects, are planned in Chautaugua, Cattaraugus, and Allegany Counties of Western New York, and in McKean County of Pennsylvania, which could affect lands in the Cattaraugus, Allegany, Oil Spring, and Cornplanter Indian Reservations. The government of these reservations is consolidated in "the Seneca Nation of Indians," a corporate body under the laws of the State of New York.

Although the Department of the Interior has no jurisdictional responsibility for these reservations, the United States recognizes the Seneca Nation and remains obligated to protect certain treaty rights. The Bureau of Indian Affairs has a liaison office at Salamanca, New York, on the Allegany Reservation, which has the responsibility to protect Indian rights of the Seneca Nation during the construction of Kinzua Allegheny Project. That office may be contacted concerning technical matters about the above named reservations.

We also note that future studies are planned in the area of the Cherokee Reservation in Western North Carolina. That reservation is under the jurisdiction of the Department of the Interior. The Cherokee Agency Office at Cherokee, North Carolina, should be contacted in matters where Indian lands and rights on that reservation may be affected.

For each of the Corps' reservoirs designed for flood-control benefits, there is either presently available or there are plans to collect sufficient hydrologic data to determine flood frequency and magnitude of the streams above each site. A study of the watershed projects of the Department of Agriculture in one state indicates that such data are probably not available for all of the proposed watershed projects. Once projects are screened and recommended for early action, streamflow data should be collected to substantiate the estimates used in project screening and for design modification as required.



None of the nine projects proposed for early action include hydroelectric power as a project function. The report shows that an additional 25,000 MW of peaking capacity will be needed in the 15 power service areas serving Appalachia by 1980 and that economical electric power is crucial to growth of the Appalachian region. As described in the main report, the region is endowed with natural resources containing all the elements for the production of significant amounts of hydroelectric power. The Federal Power Commission has listed in Appendix B of the report approximately 200 undeveloped hydroelectric power sites having over 29,000 MW of capacity. We are concerned that the development of hydroelectric power potentials was not fully reflected in the final report.

The Appalachian Water Resources Plan assumed that the power companies will provide the electric energy as fast as it is needed. We believe that where a hydroelectric power function is considered advisable, the question of public or private development is not the initial issue or concern. Irrespective of the ultimate developer of particular sites, the initial concern is whether the returns from the natural resources will be maximized, with the desire to derive the greatest benefits to the vital Appalachian region whenever a site is developed.

The Fish and Wildlife Resources appendix discusses fish and wildlife resources, resource problems, status of fishing and hunting, and means of satisfying fishing and hunting needs of the Appalachian Region. We believe that the appendix presents an accurate view of fish and wildlife resources in Appalachia.

The recommended report contains a vast array of projects which have the potential to destroy or damage the Region's fish and wildlife resources unless adequate consideration is given to protection of these resources. The report states that "In those instances where adverse ecological effects will occur due to the construction of a proposed project every reasonable compensatory action has been proposed to mitigate these effects."

We concur that every effort should be made to mitigate losses and that every project plan, to be acceptable, should include provisions to make whole that which it destroys. We are concerned that many of the plans contain stream channelization work. It is well established that this type of work is extremely damaging to the fish and wildlife habitat base. Elements of the comprehensive plan which involve extensive stream channelization should be given additional and careful scrutiny, with approval dependent on satisfactory mitigation of losses.

We are pleased that the plan for Whiteoak Reservoir provides for land acquisition for wildlife purposes. We believe that for clarity, your report should be modified to state that this area will be managed by the Ohio Department of Natural Resources.

We believe that the degree of attention given to environmental enhancement and restoration is somewhat overstated. Plan formulation was directed primarily toward meeting flood control and navigation needs. Consequently, broader environmental considerations were treated somewhat defensively and are presented as reactions to projects and programs, rather than as fundamental objectives of plan formulation. Certainly, much additional work needs to be done in connection with the preparation of authorizing documents and in conducting future studies in order to give this matter the attention required by existing laws and policies.

We agree that the magnitude of the early-action plan is excessive in view of the funds likely to be available for these purposes in the near future, and that it is imperative that a priority system be established within the context of a total program for the Appalachian region. In view of the marked differences between the views of the Secretary of the Army and those expressed in the reports of the Office of Appalachian Studies, reference to the priorities set forth in Table 11-1 of the Summary Report seems inappropriate and should be reappraised. Since outdoor recreation constitutes a significant element of the early-action plan, we would like to participate in any future discussion and planning aimed at further defining and establishing priorities.

We concur that the role of water resource projects as a primary inducement to economic activity is difficult to assess. This is particularly true with respect to outdoor recreation where there is little in the way of past experience or research to provide a basis for evaluating regional benefits. If a pilot study is initiated, adequate funds and effort should be programmed to take full advantage of this opportunity to advance the "state of the art."

We note the strong endorsement of the cost-sharing principles of Public Law 89-72 contained in the Secretary's draft report. However, the proposed liberalization and 10-year moratorium with respect to repayment of capital costs and interest raises questions of further liberalization of cost-sharing, such as the costs of operation and maintenance of recreation areas. This subject should receive additional consideration by the Congress.

With one exception we are in basic agreement with the "General Recommendations" set forth by the Secretary. General Recommendation 5 should be modified to adhere more closely to the intent of Sec. 6(a) Public Law 89-72 by requiring that all recreation planning be coordinated with and guided by the statewide outdoor recreation plans of each of the states in the region, and that any recreation developments resulting from such planning be in conformance with the aforementioned statewide recreation plans.

We are unable to understand the inapplicability of the Federal Water Project Recreation Act (P. L. 89-72) to the establishment of the trout rearing station at Hipes Reservoir. We believe that this law fully covers all fish and wildlife enhancement measures which are indeed recreation oriented. We believe that the cost sharing requirement of P. L. 89-72 should be applied to this project feature. We recommend that your proposed report be modified accordingly.

Our studies indicated significant recreation potential for meeting identified outdoor recreation needs, and general consistency with the appropriate statewide outdoor recreation plans with respect to the following projects:

Whiteoak Reservoir, Ohio  
Dalton Reservoir, Georgia  
Hipes Reservoir, Virginia  
Clinchfield Reservoir, North Carolina  
Roaring River Reservoir, North Carolina  
Curry Creek Reservoir, Georgia  
Royalton Reservoir, Kentucky (See enclosed copy of  
April 2, 1968, memorandum for additional comments  
on this project)

We concur with the Secretary's classification of the above projects as early-action elements.

Our studies and report indicated that serious environmental problems remain unresolved with respect to the following:

Logan Reservoir, Ohio  
St. Petersburg Reservoir, Pennsylvania  
Royal Glen Reservoir, West Virginia

We are pleased that the Secretary has recognized these problems and deleted the Logan and St. Petersburg projects from the early-action plan.

We regret that similar action was not taken with respect to the Royal Glen project. We do not consider the qualification placed on the Royal Glen Reservoir and Channel adequate to assure full consideration of an alternative plan to develop and enhance the recreation potentials of the South Branch of the Potomac River in its free-flowing state.

Further, to a substantial degree, the benefits accruing to the Royal Glen project would seem to evolve from the potential future development of a flood-prone area. This appears to conflict with the intent of Executive Order No. 11296. We strongly urge that further detailed studies of these aspects be conducted prior to authorization and that the Secretary of the Army revise his report by deleting the Royal Glen project as an element of the early-action plan and placing it in the category of "Projects to be Considered for Future Authorization" in order that the appropriate, detailed studies can be conducted to resolve these issues.

We find the recommendation "that the Corps of Engineers be authorized to undertake a program for the abatement of acid mine drainage in the Clarion River Basin . . ." of particular interest and significance. Strip mine area reclamation and acid mine drainage are subjects of special significance to the Appalachian region and ones which received far too little attention in the course of the subject studies. We have a special interest in the Clarion River in regard to its designation as a potential element in the National Wild and Scenic Rivers System, as well as programs carried on by the Federal Water Quality Administration and the Bureau of Mines. We are of the opinion that any abatement program should be closely coordinated with the recreation planning and pollution abatement programs associated with this river.

Since the preparation of the subject report, additional information has and will continue to be developed on specific water pollution problems in the Appalachia area and on methods for their control. For instance, improvements have evolved in advanced waste treatment methods. We recommend that the projects recommended for authorization be reevaluated during advanced engineering and design studies to determine if the water supply and water quality control needs and benefits should be revised.

On page I-5-15, at the end of the section titled "Of Water Quality Consideration," the report states: ". . . water quality storage has been incorporated in reservoirs only for those cases where secondary sewage treatment will clearly not be able to prevent unacceptable degradation of stream quality."



Secondary sewage treatment is a necessary prerequisite to the consideration of water quality storage but not a sufficient reason for "incorporating" storage in the reservoir. We feel that the emphasis has been misplaced and recommend that the statement be changed to read: ". . . water quality storage has been given consideration in reservoirs only for those cases where secondary treatment will not be able to assure acceptable stream quality." This rewording is intended to reflect a positive philosophy of seeking assurance of high quality water, rather than to reflect a "clear" demonstration that water quality not be degraded to an unacceptable level.



DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

Address reply to:  
COMMANDANT(AWL)  
U. S. COAST GUARD  
WASHINGTON, D.C.  
20591

24 JUN 1970

Mr. Robert E. Jordan, III  
Special Assistant to the Secretary  
of the Army  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

This is in reply to the Secretary of the Army's letter of 9 April 1970 addressed to Secretary Volpe, which was referred to the Commandant of the U. S. Coast Guard for response. The subject letter requested comments on the proposed report of the Secretary of the Army concerning the "Development of Water Resources in Appalachia". The report has been reviewed by the appropriate operating administrations of the Department and the following comments are offered.

The Federal Highway Administration notes that estimated costs for relocating sections of Federal-aid Primary Route 83 and U.S. Route 68 in the vicinity of the proposed Whiteoak Dam project are based on 1960 standards. These estimates would, of course, have to be increased to reconstruct the highways to the standards required for the traffic that will exist when the reservoir is built as is necessary under current law. It was further noted that the modified project for Logan Dam and Reservoir would require relocations and abandonments of approximately 20 miles of non-Federal-aid routes. The Bureau of Public Roads also recommends that the first sentence of Paragraph II, Chapter 17, Part III, Volume II, (TVA) be changed to read: "All highway relocations will be constructed to current standards for the traffic existing at the time of the undertaking."

The Coast Guard notes that the various proposed projects would provide additional water oriented recreational facilities and the attendant increase in boating would concern Coast Guard administration of the safe boating programs. Additionally, the development of the Coosa River navigation projection would directly involve Coast Guard responsibilities as related to safety of navigation, bridge requirements, aids to navigation and the administration and enforcement of the Merchant Marine Safety regulations.

The Department of Transportation finds no objections to the recommendations set forth in the report of the Secretary of the Army and the opportunity afforded to review the report and offer comments is appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read "A. A. Heckman", with a long, sweeping horizontal stroke extending to the right.

A. A. HECKMAN  
Captain, U. S. Coast Guard  
Acting Chief, Office of Public and International Affairs

FEDERAL POWER COMMISSION  
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

JUN 30 1970

Honorable Stanley R. Resor  
Secretary of the Army  
Washington, D. C. 20310

Dear Mr. Secretary:

This is in response to Mr. Robert Jordan's letter of April 9, 1970, inviting comments by the Commission relative to your proposed report on the Development of Water Resources in Appalachia.

Based on the studies made by your Department with participation by the various Appalachian States and Federal agencies concerned, your report recommends a general water and related land resources plan for Appalachia. The estimated cost of projects and programs included in the plan is in excess of \$2.4 billion. The plan would include certain State projects and certain Federal projects to be undertaken by the Departments of Agriculture and the Army and the Tennessee Valley Authority. Among the elements of the plan recommended for early action are eight major reservoir projects to be constructed by the Army Corps of Engineers and a 14-reservoir system for the Upper French Broad River Basin to be constructed by the Tennessee Valley Authority. At none of these projects would hydroelectric power be included as a project purpose.

The Commission was represented on the Water Development Coordinating Committee for Appalachia through its Atlanta Regional Office. The Commission staff prepared Appendix B to your Department's report covering power requirements and power supply for the region. The staff has also reviewed the completed report and has made studies of the power possibilities of the proposed projects.

Studies by the Commission's staff show that at only one of the eight major reservoir projects recommended for construction by the Corps of Engineers would the value of project power exceed the incremental cost of installing power facilities. This is the Clinchfield Project, North Carolina and South Carolina, where an installed capacity of about 60,000



kilowatts would be possible. This favorable economic evaluation is based upon the use of Federal financing at an annual interest rate of 4-7/8 percent. At six of the major reservoir projects, hydroelectric power installations of 5,000 kilowatts or less would be possible. However, none of these installations would be economically justified. They are the recommended projects of Royalton, Kentucky; Royal Glen, West Virginia; Roaring River, North Carolina; Curry Creek, Georgia; Dalton, Georgia; and Whiteoak, Ohio. The staff studies show also that an installation of 21,000 kilowatts could be made at the recommended Hipes project, Virginia, but that such a development would not be economically justified at this time.

The 14 reservoirs proposed for construction by the Tennessee Valley Authority in the Upper French Broad River Basin, North Carolina, would range in size up to 55,000 acre-feet of storage capacity and control drainage areas ranging up to 129 square miles. The Commission staff studies show that these reservoir projects would not be adaptable for economical hydroelectric power development.

Your proposed report lists certain projects, including three proposed reservoir projects, to be considered for future authorization for construction by the Corps of Engineers. The largest of these is the St. Petersburg project on the Clarion River in Pennsylvania. As proposed, this project would have a conventional and pumped storage hydroelectric installation amounting to 420,000 kilowatts. The recommendation on this project is being deferred since the site is in a reach of river designated for study as a possible wild, scenic, or recreation river under the Wild and Scenic Rivers Act. Should this reservoir project be constructed, it would inundate the existing 28,800-kilowatt Piney hydroelectric development of the Pennsylvania Electric Company. The Piney development is licensed by the Commission as Project No. 309 for a period terminating on October 12, 1972.

The material furnished by the Commission staff in Appendix B to your Department's report shows that there are some conventional and numerous pumped storage sites for hydroelectric power development in the Appalachian Region. Most of these sites could be developed to serve multiple purposes, including recreational uses. It appears desirable that these potential developments be considered fully in future studies of developmental programs for the region.

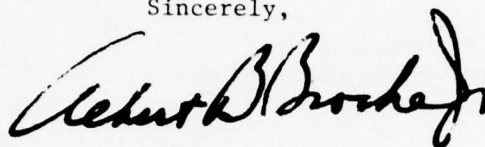
Based on its consideration of the reports of your Department and the studies by its own staff, the Commission concludes that of the projects in the general water and related land resources plan for Appalachia recommended for early construction, only the Clinchfield reservoir project

Honorable Stanley R. Resor

- 3 -

in North Carolina and South Carolina appears to provide opportunity for economical hydroelectric power development. The Commission believes that the feasibility of developing power should be considered in any further studies of this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arthur B. Brooke Jr.", written in dark ink.

Acting Chairman

DEPARTMENT OF THE ARMY  
WASHINGTON, D. C. 20310

ENG CW-PD

7 AUG 1970

Honorable John N. Nassikas  
Chairman, Federal Power Commission  
Washington, D. C. 20426

Dear Mr. Chairman:

This is in reply to the letter of June 30, 1970, from the Acting Chairman commenting on the proposed report of the Secretary of the Army on the Development of Water Resources in Appalachia.

The Acting Chairman concluded that the proposed Clinchfield Reservoir in North Carolina and South Carolina appears to provide opportunity for economical hydroelectric power development. The studies presented in the Appalachian report indicate that such power development would be uneconomical, based on power values furnished by FPC at the time of formulation and evaluation studies and on design and operation considerations for other project functions. Should the proposed Clinchfield Reservoir be authorized, further consideration will be given to power development during advanced planning, using then current power values and other formulation and evaluation criteria.

The letter from your agency and this reply will accompany the report of the Secretary of the Army when it is transmitted to the Appalachian Regional Commission for submission to the President and the Congress.

Sincerely,

/s/

Robert E. Jordan, III  
Special Assistant to the Secretary of the Army  
(Civil Functions)

**TENNESSEE VALLEY AUTHORITY**

**KNOXVILLE, TENNESSEE 37902**

**OFFICE OF THE BOARD OF DIRECTORS**

**July 7, 1970**

Mr. Robert E. Jordan III  
Special Assistant to the  
Secretary of the Army (Civil Functions)  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

Your invitation to comment on the Proposed Report of the Secretary of the Army on the "Development of Water Resources in Appalachia" is appreciated.

The participation of TVA in the conduct of this study primarily involved the Tennessee Valley portion of Appalachia. Our review also has been limited largely to items directly affecting this area. From this viewpoint, we find no basis for disagreement with the report of the Office of Appalachian Studies and have no suggestions for change in the proposed report of the Secretary of the Army.

Both the Yellow Creek Port and Upper French Broad River projects of TVA, which are included in the plan, amply fit the objectives of the Appalachian legislation. We endorse the proposed recommendation of the Secretary concerning these projects as early action elements of the plan. On page 7 of the Secretary's report, there is a paragraph pointing out that the early action plan is not a complete plan for the development of water resources in Appalachia. This point is certainly true for the Tennessee Valley area; the two projects recommended are only a part of the additional kinds of programs and investigations which the detailed report shows to be needed.

Implementation of the proposed projects and programs to achieve the expected expansion effects in Appalachia is dependent on many other public and private investments and decisions. It is encouraging that the Secretary's proposed report recognizes this fact and its implications for implementation arrangements. The two TVA projects will be initiated as integral elements of area development activities designed to assure that project-associated investments are forthcoming.

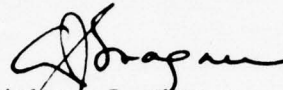


Mr. Robert E. Jordan III

July 7, 1970

The Office of Appalachian Studies is to be commended for its ambitious effort in carrying out this extremely complex assignment. We appreciate the opportunity to participate in that effort.

Sincerely yours,



Aubrey J. Wagner  
Chairman



WATER RESOURCES COUNCIL

SUITE 900

1025 VERMONT AVENUE NW.

WASHINGTON, D.C. 20005

*Secretary of the Interior*  
Chairman

*Secretary of Agriculture*

*Secretary of the Army*

*Secretary of Health,  
Education, and Welfare*

*Secretary of Transportation*

*Chairman, Federal Power  
Commission*

**JUL 30 1970**

Dear Mr. Secretary:

By letter dated April 9, 1970, Mr. Robert E. Jordan, III, transmitted your proposed report, together with other pertinent papers, on the "Development of Water Resources in Appalachia" to the Water Resources Council for review and comment.

We have reviewed the report with great interest. We note that the plan set forth in the report for the development of water resources in Appalachia has been formulated and evaluated generally in accordance with the new planning concepts and principles for Federal participation in the preparation of comprehensive regional or river basin plans and for the formulation and evaluation of Federal water and related land resource projects now being developed by the Water Resources Council.

Accordingly, the Water Resources Council has no objection to the submission of your proposed report to the Appalachian Regional Commission and to the President for his recommendations.

Sincerely yours,

Walter J. Hickel  
Chairman

Honorable Stanley R. Resor  
Secretary of the Army  
Washington, D. C. 20310

### III. VIEWS OF THE APPALACHIAN STATES

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## STATE OF ALABAMA

GOVERNOR'S OFFICE

MONTGOMERY

ALBERT P. BREWER  
GOVERNOR

July 6, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the  
Secretary of Army  
Department of Army  
Washington, D. C. 20310

Dear Mr. Jordan:

Since 1969, Alabama has been methodically developing a broader approach to more fully capitalize on the potential water resources development contribution to the State's overall economic development. Act #186 of the 1969 Session authorizes the organization of a public corporation named the Coosa Valley Authority to issue bonds and administer expenditures for the non-Federal cost of improving the Coosa Waterway. Through constitutional amendment, by Act #162 of the 1969 Legislature, the voters of Alabama provided for the authorization of \$10 million in bonds specifically for the non-Federal estimated cost of improving the Coosa River Waterway for navigation from Montgomery to the Alabama-Georgia boundary. In full support of these specific legislative acts is the establishment of the Alabama Development Office by Act #657 passed during the 1969 Session. This office will provide for the efficient coordination of and cooperation in the programs of the various governmental agencies, groups, and institutions within the State in promoting the human, economic and physical resources of the State. Upon this groundwork, Alabama is well prepared to concur with the Secretary's recommendations for the Coosa River Waterway and to participate fully in continuing State-Federal partnerships in guiding the evaluation of water resources development concept.

The State of Alabama believes that a significant forward step has been made by the U. S. Army Corps of Engineers and its cooperating agencies in the preparation of the report on water resources development in Appalachia. In the relatively recent past, planning for water resources development has been evolving to recognize the multiple purposes that can be served



Mr. Robert E. Jordan, III

July 6, 1970

by such investments. The present report adds new dimensions to this evaluation by recognizing additional purposes involving State and Federal agencies more fully in the planning process, designing projects with expanded purposes in mind, and recognizing the need for associated action to be taken to achieve the objectives desired.

In the preparation of this report, as is true of many stated steps, not all the innovations are fully perfected but a new phase in water resources planning has been initiated. We believe that the Secretary's report properly recognizes and encourages some of these innovations, and in other areas should strongly endorse progress made.

In the realm of institutional innovation, the joining of State and Federal representatives in the Water Development Coordinating Committee for Appalachia made a wholesome addition to the quality of the undertaking, and a mechanism for its continuation should be established. The WDCCA was useful for two reasons. First, it brought into the plan formulation the knowledge, authorities, and points of view of a fuller range of agencies and their constituents. Of equal importance, the WDCCA operated in context of state-developed and regionally-approved plans for the overall development of Appalachia so that water resources development could be planned in harmony with other existing and contemplated undertakings. This beneficial experience should be perpetuated in a continuing organization that can assess, establish, and revise priority as the Appalachian Regional Commission or its successor continues the effort to develop this region.

As a direct outgrowth of the evolving plan for the development of the region and the participation of state agencies in the planning process, it was possible to design and evaluate proposed projects that would enhance the economic potential of affected areas. Under the general title of expansion benefits, the Corps reported details and evaluated the anticipated changes in regional economic expansion that could follow the creation of a new water resources situation. In response to these relatively new characteristics of water resources planning, a new index of performance was devised and, in the draft report of the Appalachian studies, costs were allocated to this purpose. In our view, it is unfortunate that the Secretary has not seen fit to recognize economic expansion as a project purpose in cost allocation. This is inconsistent, in our view, and has cast a cloud on the entire concept which is fundamental to the use of water resources investments in overall development. We, therefore, urge the Secretary to reconsider his position and to recognize that regional expansion be an element in cost allocation to reflect the impact water resources projects will have upon the performance of the region.

Mr. Robert E. Jordan, III

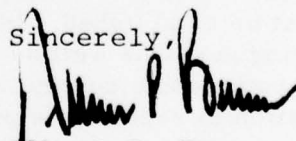
July 6, 1970

If the full potential benefits of water resources projects are to be realized, State and local investments and other activities will be required. We, in Alabama, have already taken fundamental steps in that direction, as will be indicated below, but from the viewpoint of the region as a whole, we strongly support the Secretary's recommendation that the Federal Government advance non-Federal cost for a ten-year, interest-free period. This will help enable the region, with its presently limited financial resources, to make the necessary associated investment which encourages phased creation of the conditions needed to capitalize fully on the opportunities visualized in the plans for appropriate development.

We strongly endorse the Secretary's recommendation that these needed public actions be taken in phase with water resources development. We visualize the successor agency to WDCCA and ARC as providing to the Secretary the advice needed to assure that phased implementation will occur.

We also recognize that existing Federal programs do not fully encompass all of the aspects of environmental improvement requirements for effective and efficient development and preservation. Moreover, present processes can delay making needed environmental quality investment because of the program requirements of various agencies. Alabama, therefore, believes that Congress should consider enacting a grant-in-aid program under which states could initiate projects that are compatible with the regionally-approved plan for development. We visualize this as, in effect, a new section of an extended Appalachian Act with allocation among the states and matching requirements analogous to those that have successfully operated under the present law.

Sincerely,



Albert P. Brewer  
Governor

lw



**Executive Department**  
**Atlanta**

**Hester Maddox**  
GOVERNOR

June 26, 1970

**Zell Miller**  
EXECUTIVE SECRETARY

Mr. Robert E. Jordan, III  
Special Assistant to the  
Secretary of the Army  
(Civil Functions)  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

Thank you for your letter of April 7, 1970, asking for my views and comments on the Secretary of the Army's proposed report, "Development of Water Resources in Appalachia."

The State of Georgia endorses the principal goal of the report, that of improving the general economy of the Appalachian area and enhancing the well-being of its people. We also are pleased with the attention paid to assessing effects of proposed projects on the environment. These objectives, if implemented, would have a major impact on the entire region of Appalachia.

The importance of establishing a permanent organization to continue water resources development beyond the potentials fulfilled by this report cannot be over emphasized. If a comprehensive water resource plan for Appalachia is to be implemented, it is obvious that a continuing mechanism for joint Federal-State water resources planning must be established. In this way, project priorities can be adjusted to changing needs as well as new project proposals. Specifically, we would recommend a continuing Federal-State water resource planning organization to replace the present Water Development Coordinating Committee. This committee would be responsible to the Appalachian Regional Commission or its successor under future legislation.

A key water resource issue is designing and evaluating water resource projects to serve more than traditional water purposes. This places greater emphasis on the service relationships of water projects to other major activities in the comprehensive development of the broad area in which the project is located. The validity of recognizing the relationship of water development's impact on such issues as community and area development, recreation, public health, and environmental factors is receiving increasing recognition. This concept has been labelled "regional development."

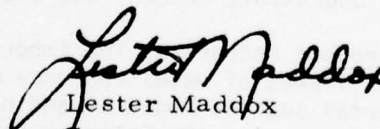
Mr. Robert E. Jordan, III  
June 26, 1970

Since regional development is a legitimate benefit which is frequently spread across State lines, changes should be made in existing Federal policy and legislation pertaining to cost-sharing. Greater Federal participation in project construction and planning for regional development would enable State and local interests to implement water resource development which would otherwise remain on paper. We believe some sort of grant-in-aid system should be established whereby the States could construct projects which are presently stymied due to policies guiding the Federal construction agencies and the States limited financial resources. In addition, we endorse the Secretary's proposal of advancing local costs with an interest free 10-year delay in repayment.

With regard to specific projects in Georgia, we agree with the Secretary's recommendation of early action authorization of the Dalton Reservoir and Curry Creek Projects as well as reclassification of the Coosa River Navigation Project from Montgomery, Alabama, to Rome, Georgia, as an active project. These projects are important to State and regional Appalachian objectives.

Georgia will continue to cooperate with all agencies concerned to help insure the effectiveness of the present report and all future work in the Appalachian region.

Sincerely,

  
Lester Maddox  
Governor

LM:rwh



**OFFICE OF THE GOVERNOR  
FRANKFORT, KENTUCKY 40601**

LOUIS B. NUNN  
GOVERNOR

July 8, 1970

Mr. Robert E. Jordan III  
Special Assistant to the Secretary  
of the Army (Civil Functions)  
The Pentagon  
Washington, D.C. 20310

Dear Mr. Jordan:

The nation is at a crucial crossroad in its history of water resources. Our water supply is not only polluted but is also dwindling, while our demand for water is surpassing the supply. The nation requires a plan for alleviating this crisis and assuring future generations of a source of water.

After reviewing the proposed Report of the Secretary of the Army on the Development of Water Resources in Appalachia, I commend the proposed report as a significant breakthrough in solving water resources problems. The Corps of Engineers, and particularly the Office of Appalachian Studies, along with the Water Development Coordinating Committee for Appalachia (WDCCA) are to be praised for their high level of achievement in making this report and for the coordination both groups showed in attaining their objective.

However, in addition to this breakthrough, we concur with other states in the belief that there needs to be an organization to continue these far-reaching efforts to coordinate Federal and State water resource planning.

Although the report recognizes the importance of water resource development, the effect and impact of water resource development has a broader basis and affects other areas such as regional and national development. Congress has recognized this in passing the Inter-governmental Cooperation Act of 1968 which directs that all local, state, and national considerations shall be taken into account in the planning, funding, and evaluation of federal projects and programs. As a result, regional expansion benefits should be incorporated in the project planning, authorization, and evaluation process and cost apportionment for all water resource development projects, including those listed in the report. Cost assigned to regional expansion should be borne by the Federal Government.

As stated, the water supply situation is critical. The best sites for dams and reservoirs have been utilized. This fact, along with the problems of relocation and the fact that the Appalachian Region is the major source of water supply for a large portion of the Eastern half of the nation, makes it imperative that positive steps be taken to insure that municipal supply, industrial supply, and water quality be incorporated in any future construction plans for reservoirs.

Mr. Robert E. Jordan III

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While the current water supply laws providing for a ten-year interest free payment period is helping, we are concerned that even greater efforts may be required to assure the provision of an adequate future water supply. We suggest that more effective steps be taken to establish a continued investigation to determine the nature and feasibility of the steps necessary to achieve this future water supply.

I am concerned that the Secretary's recommendations exclude any reference to changes in the Federal Water Project Recreation Act (PL 89-72). Changes should be made to permit federal construction of project or project parts which have substantial public benefits to regional economic development.

To provide better coordination between different components of water resource development, the authorization process should be flexible enough to permit joint authorization and construction among federal agencies.

We concur with the Secretary's recommendation that the Royalton-Salyersville project be promptly expedited. We recognize the importance of this project. It is designed to have a great impact on water resource development and social and economic development, not only in Appalachia Kentucky and the Appalachian Region but also on a national basis.

The Secretary has recommended certain legal assurances of non-federal interests prior to the commencement of construction of any aspect of this project. The General Assembly of the Commonwealth of Kentucky has enacted legislation that permits the establishment of an organizational arrangement empowered to provide these legal assurances. The Legislative Acts include provisions for state developmental planning, formal multi-county area development districts, as well as specific new community development. Copies of this legislation will be made available following printing. Therefore, in order to effectuate this project, we are in full accord with the Secretary's recommendation to fund a pilot study to evaluate the capabilities of Royalton.

The Secretary's proposed recommendation indicates that the Midland Local Protection Project, Licking River, Kentucky, be considered for authorization only after additional studies have been made. At the time of the printing of the Main Report, Part I, Vol. I, Summary Report on Development of Water Resources in Appalachia, a public hearing had not been held on the Midland Project. Subsequently, a joint hearing with the Commonwealth and the Corps was held and the project was supported by both local and regional people. Federal, State, and Local governments have already expended a great amount of money in the planning of this project.

Planning for the Midland Project has shown that several disconnected sites are available for industrial, commercial, recreational and residential development. Only a small portion of the total land can be developed without flood protection and these sites are too scattered to achieve any reasonable cost or scale of development. Thus, the situation is such that commitment for all aspects of the project must be consummated simultaneously in order to insure the proper development of this project. The situation is impossible unless steps are taken to assure

Mr. Robert E. Jordan III  
Page 3

this simultaneous agreement. Therefore, we propose that the Midland Project be recommended for authorization, with the following provision:

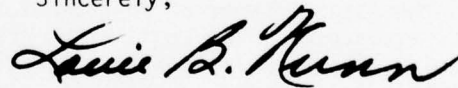
Prior to commencement of construction, the Secretary shall have determined to his satisfaction that there is reasonable assurance that programs and measures necessary for the accomplishment of the economic development objectives of the plan will be instituted in such a manner as to secure the effective realization of the plan set forth for the Midland Project.

These assurances are the same as those requested by the Secretary in respect to the Royalton Project and as previously indicated, the Commonwealth has provided the legal means to grant these assurances. Additional information in greater detail concerning the Midland Project will be transmitted within the next week.

Kentucky wishes to affirm its agreement with the States of Alabama, Mississippi, and Tennessee that top priority should be placed on development of the Tennessee-Tombigbee Waterway System.

Again, let me emphasize my deep appreciation for the outstanding cooperation shown in the completion of this report and point out that the value of this achievement has no precedent.

Sincerely,



LOUIE B. NUNN  
Governor



EXECUTIVE DEPARTMENT

ANNAPOLIS, MARYLAND 21404

July 7, 1970

Mr. Robert E. Jordan III  
Special Assistant to the  
Secretary of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

The Water Resources Study for Appalachia is a landmark in the development of water resources planning efforts. Although the merits of many have yet to be fully evaluated, the innovations associated with this study will undoubtedly influence future water resources studies. From basic study organization, through the formulation of objectives and evaluative procedures, to the design of institutional arrangements for implementing plan elements, the Appalachian Water Resources Study has explored and developed new ideas and techniques. Certainly, the Federal-State coordinating achieved through the Water Development Coordinating Committee for Appalachia is highly desirable. This type of planning organization should be continued.

The Appalachian Regional Development Act provides many examples of the Congress' intent to bolster the economy of the Appalachian Region by increasing Federal monetary inputs to that Region. Since the Congress has established regional development as a planning objective of the Appalachian Water Resources Survey, the questions remaining, as your report indicates, are in what manner and to what extent the Federal government should contribute to development of the region. Two general techniques have been proposed: 1) Federal assumption of project costs allocated to regional development purposes, and 2) deferment of local costs and interest payments for a period of ten years. Since the final decision rests with the Congress, I would urge you to present both techniques in your report. To aid their decision, the implications of each alternative - the magnitude of non-federal



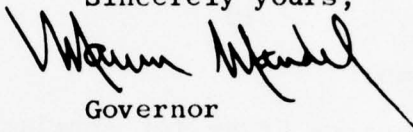
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Mr. Robert E. Jordan III

July 7, 1970

costs and the comparative status of Appalachian Region projects vis-a-vis projects throughout the nation - should be documented. Both schemes, together with the implications of each for the nation, and the Appalachian Region in particular, should be presented to the Congress for their decision.

Sincerely yours,

  
Governor



STATE OF MISSISSIPPI  
EXECUTIVE DEPARTMENT  
JACKSON 39205

JOHN BELL WILLIAMS  
GOVERNOR

July 8, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the  
Secretary of the Army (Civilian Functions)  
United States Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

I would like to commend the United States Army Corps of Engineers for the quality of its report on Appalachian water resources. In general, I am in accord with the Secretary's report and recommendations. Notable steps have been taken in relating water resources programs to overall development goals, and this has been possible, in large part, because of the strong component state participation in the planning process. I feel that a continuation of the process begun by the Water Development Coordinating Committee for Appalachia is desirable.

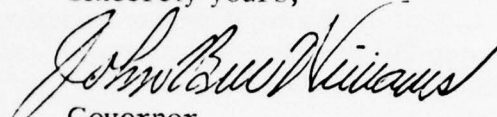
From the standpoint of Mississippi and the other states in Appalachia, I submit that a contribution to further economic development will result from the continuation of the Yellow Creek Port Project and urge that efforts to bring it into existence be supported. We will do all that we can to assure that the project, when completed, will make the maximum possible contribution to the well-being of the people of Mississippi and of the rest of Appalachia.

The public costs of furthering development are quite large, and caution should be exercised against over-extending the fiscal resources of the areas affected. The Secretary's report also reflects this concern, and we feel it advisable that the federal government advance the non-federal costs of the recommended projects for a ten-year interest-free period. It is our feeling that an extension of the national concern for Appalachian development should lead to the allocation of some project costs to economic expansion---costs that properly should be borne by the federal government.

Mr. Robert E. Jordan, III  
Page 2  
July 8, 1970

Water resources development can play an important part in the further progress of Appalachia and we are ready to continue to contribute to the development of policies and priorities in concert with the other states of the region.

Sincerely yours,

  
Governor

JFW:ecf



STATE OF NEW YORK  
EXECUTIVE CHAMBER  
ALBANY 12224

NELSON A. ROCKEFELLER  
GOVERNOR

July 17, 1970

Dear Mr. Jordan:

Thank you for your recent letter regarding the proposed report of the Secretary of the Army on the "Development of Water Resources in Appalachia."

Since the creation of the Water Development Coordinating Committee for Appalachia (WDCCA) in 1965, New York State has actively participated in the Appalachian Water Resources Study.

The Appalachian Water Resources Report represents a major step forward in Federal-State cooperation and should serve as a model for future joint planning and development operations. The new methods developed to identify regional benefits which would result from the development of water resource projects are commendable and offer real promise with continued refinements for use on a nationwide basis.

From New York State's perspective, early action on the Stannard Reservoir project would be desirable. This project is recommended for early authorization in the main Water Resources Report; however, it is deferred for additional study in the Secretary of the Army's report.



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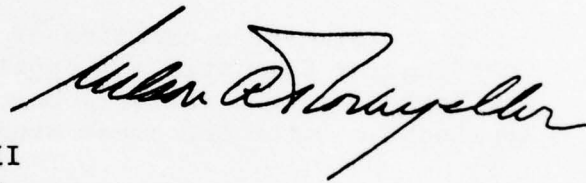
Mr. Robert E. Jordan, III

July 17, 1970

Extensive public hearings have been held and, at its meeting on May 1, 1969, the State Water Resources Commission recommended that the Stannard Reservoir Project be advanced for Congressional action. The Commission studied the Proposed Report of the Secretary of the Army and reaffirmed that recommendation.

We are pleased to endorse the Water Resources report and look forward to the same fine spirit of cooperation as these projects enter the implementation phase.

Sincerely,

A handwritten signature in dark ink, appearing to read "Hubert H. Hays", written in a cursive style.

Mr. Robert E. Jordan, III  
Special Assistant to the  
Secretary of the Army  
Department of the Army  
Washington, D. C. 20310



STATE OF NORTH CAROLINA  
GOVERNOR'S OFFICE  
RALEIGH 27602

ROBERT W. SCOTT  
GOVERNOR

July 9, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the Secretary of the Army  
The Pentagon  
Washington, D. C.

Dear Mr. Jordan:

I appreciate your offer to comment on the proposed report of the Secretary of the Army based on studies prepared by the Office of Appalachian Studies. I welcome the opportunity to offer North Carolina's position relative to the development of its water resources within the context of plans for comprehensive development of its total resources.

Although North Carolina recognizes the potential that water resources has to offer in the long range, comprehensive development of the State, its most effective utilization can only be realized when this development is complementary with the broader aspects of social, economic and overall environmental development of the State and multi-county regions within it. The alternative forms of development are manifold in number and must be responsive to the needs and aspirations of society and, in the final analysis, the needs of each individual.

We have many alternatives to consider as we work to facilitate optimum development. Our task is to choose those alternatives which are most directly related to present and future needs of people in our society. The real rationale for planning, especially water resources, has to do with those decisions that we can make today which will probably result in a more healthful and pleasant environment for the future citizens of North Carolina.

We in North Carolina need to think of development in the broadest sense of the word. In the past, we have concentrated at different times on education, or on highways, or on health, or on some other aspect. The time has come

July 9, 1970

Mr. Robert E. Jordan, III

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to pull all of our efforts together in a unified approach. To this end, I am planning for the establishment of a Governor's Council on State Goals and Policy. This Council will be a high-level advisory body to consider, across the board, all activities of State Government that relate to the full development of our State. It will include health, education, housing, economic development, transportation, environmental programs, and all other State functions which influence the type of future we create for resources to the tasks of planning and directing the expenditure of local, State, and Federal funds to achieve the good life for our citizens.

A balanced program of economic, social and environmental development requires the judicious apportionment of the financial resources of the local people as well as those of the State, region, and nation. Since resources are always limited, the choices are often difficult and the establishment of priorities is necessary. In making these choices, it is essential that the local people have access to all of the facts and all of the alternatives. To this end, North Carolina has established a series of multi-county regions for planning purposes. It is the intent that these regions shall provide the framework for communications between the local people and the other elements of government.

The ability-to-pay and the proportionate share of the costs that can be borne by the local areas will vary with the locality and individual circumstances. Some of the areas having great potential for water resource development are now faced with immediate needs for schools and hospitals. These needs must be taken into consideration in the phasing of all developmental programs and hard choices must be made at the State and local level.

The ten-year deferred payment program suggested in your report gives me real concern. In one sense it is an attractive provision in that some immediate needs can be met. However, I fear that we may commit ourselves to programs that will place undue strain on the financial resources of local governments ten or more years in the future.

Programmed economic development is still a very inexact science. We cannot predict with a high degree of certainty just what our needs will be ten or 20 years ahead. Therefore, I fear that any extensive use of deferred payment programs may limit the flexibility of local governments as they attempt to meet the needs of our citizens in future years.

July 9, 1970  
Mr. Robert E. Jordan, III  
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North Carolina has traditionally followed a pay-as-you policy so that the suggested deferred payment program could well present the State with certain legal as well as fiscal problems.

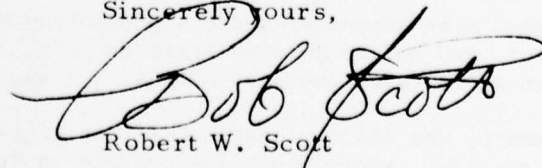
Congress has designated Appalachia as an area requiring special approaches to the solution of its problems and, in response to this, the report on the region's water resources reflects concern for the economic expansion implications of the proposed projects. In our opinion, there are sound reasons to have these implications reflected also in cost allocations and in the apportionment of these costs to the Federal Government.

Some of our streams in Appalachia are trout waters which are irreplaceable and should be preserved in their natural state without impoundment. They have unique recreational value which continuously increases, and unmeasurable aesthetic value. Impoundments in less critical areas will require mitigation of wildlife losses in the public interest.

The Report, Development of Water Resources in Appalachia, represents a great step forward in the recognition of the water resource potential of the area. Much work remains to be done in the implementation of its findings. To this end, North Carolina will look forward to a continuing association with the Appalachian Regional Commission and the various Federal agencies responsible for the various aspects of its development.

The authorization and construction of the Clinchfield and Upper French Broad projects are important parts of this implementation from the standpoint of North Carolina and of the Appalachian region as a whole. We support this effectuation.

Sincerely yours,



Robert W. Scott





STATE OF NORTH CAROLINA  
GOVERNOR'S OFFICE  
RALEIGH 27602

ROBERT W. SCOTT  
GOVERNOR

July 22, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the  
Secretary of the Army  
The Pentagon  
Washington, D. C. 20315

Dear Mr. Jordan:

On July 9<sup>th</sup> I wrote to you to provide the views of the State of North Carolina on the proposed report of the Secretary of the Army on "Development of Water Resources in Appalachia". In my letter I stated that we support the authorization and construction of the Clinchfield and Upper French Broad projects. I would like to add some supplemental information, primarily as to priorities.

It is my desire that the TVA project for development of the Upper French Broad River Basin be given first priority, because the project has already been approved and is ready for construction. In addition, it is located in a top priority Economic Development Corridor under the Appalachia program, and the desired growth has given rise to water supply and water quality problems which can be met only with a contribution by this project. The State has given the necessary assurances of local cooperation.

The next priority, although on an almost equal footing, should be accorded to the Clinchfield Dam project. It will serve an area which needs economic growth and the project has a very large economic development component in it. The State has also given all required guarantees of local cooperation on this project. In addition, the Governors of North Carolina and South Carolina in 1968 consummated an agreement for cooperation on projects, including this one, which are near the boundary between the two States.

The State also supports, and has guaranteed local cooperation on, the Roaring River project, and on the Reddies River project. The latter is presently authorized, and has been reactivated independently of the Appalachian study.

In summary, the State of North Carolina supports the Secretary's proposed report, except for one item, wherein certain changes in local cost-sharing are proposed. For Clinchfield, the non-Federal water supply cost is increased from \$7,940,000 to \$14,535,000 while for Roaring River it is increased from \$776,000 to \$872,000. It appears that regional expansion benefits were not given weight as a Federal purpose,

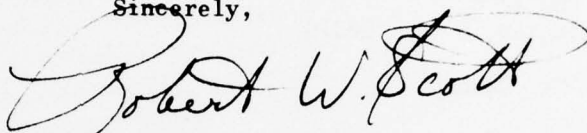
Mr. Robert E. Jordan, III

Page 2

July 22, 1970

although the fundamental purpose of the Appalachian Regional Development Act of 1965 would seem to require a break with the past in this respect. The State has clearly shown its willingness to provide its substantial contribution to the projects, but I would like for that share to be consistent with the purposes of the program.

Sincerely,

A handwritten signature in cursive script, reading "Robert W. Scott". The signature is written in dark ink and is positioned above the printed name.

Robert W. Scott



JAMES A. RHODES  
GOVERNOR

STATE OF OHIO  
OFFICE OF THE GOVERNOR  
COLUMBUS 43215

May 27, 1970

Mr. Robert E. Jordan III  
Special Assistant to the Secretary  
of the Army (Civil Functions)  
The Pentagon  
Washington, D. C. 20310

Dear Mr. Jordan:

Reference is made to the proposed report of the Secretary of the Army on The Development of Water Resources in Appalachia furnished for our review and comment with your letter of 7 April 1970.

It is our consideration that the report on Development of Water Resources in Appalachia is a milestone in the very complex field of water resource planning. Probably the most significant innovation in the report is that truly multiple objective planning has been conducted. This landmark report represents a breakthrough in the traditional method of evaluating water resource investment. I commend to the Administration and the Congress the efforts of the Office of Appalachian Studies and participants in the work of the Water Development Coordinating Committee for Appalachia (WDCCA) to incorporate economic development as a national objective in addition to the traditional objective of national efficiency. The report recommends projects for authorization which will, in conjunction with other public and private investments, greatly stimulate economic activity in the Appalachian portion of Ohio.

We note with some concern that the proposed report of the Secretary of the Army differs in certain respects from the findings and conclusions of the studies by the Corps of Engineers. These differences are:

- (a) With reference to multiple objective planning, as mentioned above, the Corps of Engineers allocated costs among the conventional purposes of each project and to economic development as a new objective. This technique has the effect of spreading the joint costs more equitably; for instance, reducing apportionments for water supply. The Secretary's proposed report argues against this concept of multiple objective planning, and as a consequence, the cost of non-Federal participation increases above those suggested by the Corps of Engineers (see Table 8-2 in the Summary Report). For example, compliance with the Secretary's recommendation would require that the State of Ohio pay for water supply at the Whiteoak Reservoir nearly \$5 million or 150% in excess of that found appropriate by the Corps, which results in a cost of \$493,000 per MGD.

May 27, 1970

In fact, due to this high cost of industrial water supply, it is doubtful that new industry will be attracted to the area. This might prove self-defeating to the objectives, since provision of water supply would probably remove the major, if not the only, bottleneck to growth in Brown County, Ohio. In the interest of economic expansion and regional development in our Southwest Region of the State, it is recommended that the report's method of allocation to economic development be retained. If this recommendation is not honored consideration should be given to other equitable non-Federal cost-sharing requirements for water supply storage in the Whiteoak Reservoir. In fact, the Appalachian Regional Development Act does this for other programs.

- (b) The Secretary's proposed report withholds recommendation for authorization of four projects until additional studies are made. In Ohio, the previously authorized Logan Reservoir in the Hocking River basin is to be studied again prior to recommendations for modification of the present authorization. The Logan Reservoir Project has been studied for many years and is vital as a key element of the overall system plan for management of water resources in the Hocking River Basin and also the proposed Hocking Hills National Recreation Area. Solution of the water and related problems and needs of the area are long overdue. Further delays will seriously jeopardize the well-being of the people of the area; without expedited aggressive planning of the project, irreparable damage could be done to the very ecological and scenic values of the lower Clear Creek Valley which are to be a major consideration in the Secretary's proposed additional studies. It is the State of Ohio's view, and also the consensus of the WDCCA members, that additional studies would be more properly performed during the pre-construction planning period. We feel the Corps of Engineers analysis of this project is quite sufficient for modification of authorization, a pre-requisite to advance planning and in accordance with consensus of the members of the WDCCA. Since time is of the essence, I recommend that the location of Logan Reservoir dam be specifically determined during pre-construction planning, in consideration of the ecological and scenic values of the lower Clear Creek Valley, and regardless of such location, that the lower Clear Creek Valley be acquired and maintained as a natural area as part of the plan, all as approved by the President prior to initiation of construction.
- (c) The Secretary's proposed report does not directly support the proposed programs of the Department of Agriculture which the Corps of Engineer's report finds ready for Congressional action. The Soil Conservation Service has proposed the preparation of work plans for a number of watersheds which show great promise of stimulating economic development in ways quite comparable to the stimulation which the Corps projects will induce. We believe Agriculture's contributions to the developmental package are desirable, and that work plans for these watersheds should be jointly prepared with the Corps of Engineers.



Robert E. Jordan III


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May 27, 1970

Again, I commend to you and the Congress the pioneering work in comprehensive water resource planning by the Office of Appalachian Studies, and trust that the Administration, the Appalachian Regional Commission, and the Congress will act favorably on the report of the Corps of Engineers without modifications. We would hope that, after authorization, the Congress will act expeditiously to appropriate funds for urgently needed projects in the Corps' report, projects which will clearly help in industrial dispersion and in reversing present migration rates of rural people to city ghettos.

Finally, should it be the decision of the Congress that additional studies on certain projects are still required prior to authorization, as proposed by the Secretary of the Army, we strongly recommend that funds therefor be provided to the Corps in FY 1971 by additions to the General Investigation Program of the Corps of Engineers.

Sincerely,



JAMES A. RHODES  
Governor

JAR:bg



COMMONWEALTH OF PENNSYLVANIA  
GOVERNOR'S OFFICE  
HARRISBURG

THE GOVERNOR

July 6, 1970

Mr. Robert E. Jordan III  
Special Assistant to the Secretary  
of the Army (Civil Functions)  
U. S. Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

As requested in your letter of April 7, 1970, we have reviewed the proposed report of the Secretary of the Army on the "Development of Water Resources in Appalachia."

It is stated that the proposed report is based upon studies performed by the Office of Appalachian Studies, U. S. Army, Corps of Engineers, and that these studies include certain innovative features. We do not dispute this point, but submit that the proposed report does not incorporate or even acknowledge many of the desirable features of those studies. Indeed, we are more disturbed by what is missing from this report than we are by its content.

The Commonwealth worked closely with the Office of Appalachian Studies and the other Federal agencies through the Water Development Coordinating Committee for Appalachia seeking agreement on the plan elements and priorities contained in the Summary Report that would be consistent with the needs and priorities of the Commonwealth as expressed in the Pennsylvania Water Supplement, reproduced in Part V, Chapter 9 of the Main Report.

Due to the time and funding limitations imposed on the study and the fact that the proposed early action program was formulated primarily on the basis of existing Federal policies and legislation, we were not entirely successful in obtaining full expression and consideration of our views.

Indeed, we were disappointed with the decision, made part way through the survey, that the early action program should conform generally to established Federal legislation and policies -- a decision in which the States did not participate and in which their concurrence was not requested.

Mr. Robert E. Jordan III

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July 6, 1970

Because it was obvious from the beginning that this survey could not strictly adhere to policies and legislation applicable to other water resources surveys if it were to meet the objectives set forth in Section 206 (a) of the Appalachian Regional Development Act of 1965, it was our hope and initial understanding that the Appalachian experience would serve as a "national laboratory" to develop water policies suited for national use, and that the survey would test and provide a firm basis for establishing precedents for new areas of Federal responsibility and new procedures for authorizing and funding water resources projects that could be proposed immediately for the consideration of Congress, rather than deferring these for further study and later consideration.

Because of this and the regrettable fact that much of the screening process occurred before the States were able to complete their supplements, some of the Commonwealth's high priority projects, while not completely eliminated from consideration, were deferred for possible future study rather than for immediate action. This was particularly true of certain vital mine drainage pollution abatement and reservoir projects.

The Pennsylvania Water Supplement, as well as those prepared by other States, was an innovation in Federally-authorized water resources surveys. Because they are integral parts of the report made by the Office of Appalachian Studies, we cannot emphasize too strongly that their content, recommendations, and priorities must be given equal weight and consideration along with those of the Federal agencies.

We concur with the statement that complete implementation of the plan outlined in the Secretary's report "will require additions, changes, or modifications to established water resources authorities." The views of the Appalachian States, contained in Chapter 9 of the Summary Report, recognize this problem and suggest certain changes which could be made. Accordingly, we urge that the Secretary consider specifying and including further recommendations or suggestions with regard to the additions, changes, or modifications needed in water resources authorities for complete implementation of the plan.

In all fairness, we note that the survey by the Office of Appalachian Studies does point out a few new areas where Federal responsibility might be established, and suggests a new procedure for funding water resources projects. We are concerned that the procedure developed by the Office of Appalachian Studies to lower non-Federal cost sharing requirements by allocating costs to expansion benefits has been by-passed in the proposed report in favor of a system of interest free advances and deferred repayments of the local share of the costs for all non-vendible outputs.

The Secretary's recommendation, in essence, only postpones the inevitable date when the obligations must be met by non-Federal interests with relatively limited financial resources, and, in our opinion, an additional recommendation supporting the use of the technique, as developed by the Office of Appalachian Studies, is urgently needed. We strongly urge that this additional recommendation be included in the Secretary's report.

With respect to the proposed criterion that local interests provide reasonable pre-construction assurances, if the intent is as expressed, we believe that the Commonwealth is in a position, through its advanced planning and related activities, to furnish assurances as to the economic activity likely to occur as a result of project construction.

Because of the critical needs in the Appalachian Region, we cannot agree with the proposal that only one of the projects in the plan be constructed immediately to assess the role of water resources projects in regional development. Instead, every effort should be made to construct as many soundly-conceived projects as possible without undue delay.

We support the suggestion that a priority system be established and that priorities be developed by the Appalachian Regional Commission in coordination with others who are aware of the conditions and needs of the Region. In doing so, the Commission should give full consideration to the priorities in Table II-1 of the Summary Report and the State Supplements, as well as the indices of performance in Chapter 11.



Mr. Robert E. Jordan III

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July 6, 1970

Following are our comments with regard to specific project recommendations affecting the Commonwealth in the Secretary's report:

#### Otocsin and Naturealm Projects

We concur in the proposed recommendation that the Otocsin and Naturealm Projects be implemented as early action elements of the plan. However, we request that the recommendation propose special Congressional and executive department support in addition to the limited assistance presently available under previously authorized Federal programs and being utilized to the fullest extent.

#### Selected Upstream Watershed Projects

Concerning the proposed recommendation on these projects, we urge that the report, with the concurrence of the Secretary of Agriculture, specifically list the 42 projects tabulated on page 1-7-7 of the Summary Report and recommend them for early authorization and implementation. This recommendation should include the following projects in Pennsylvania: Upper Casselman River, Stony Creek, Brokenstraw Creek, Upper French Creek, Wills Creek, Blacklick Creek, Connoquessing Creek, and Sewickley Creek.

It is our understanding that the Jacobs Creek project has already been authorized. Further, we would urge that the Upper Loyalhanna Creek Project, tabulated on page 1-6-86 (Pa.) of the Summary Report and recommended in the Pennsylvania Water Supplement be added to the list of recommended projects.

We concur in the recommendations concerning other U. S. Department of Agriculture programs.

#### Tamaqua Local Flood Protection Project

Because the need for early authorization and construction of this project is urgent, we concur with this recommendation and would suggest implementation at the earliest date.

Mr. Robert E. Jordan III

- 5 -

July 6, 1970

### St. Petersburg Project

We note that the proposed report states that the St. Petersburg Reservoir will be considered for authorization after the matter of the designation of the Clarion River, as directed in Section 5 of the Wild and Scenic Rivers Act has been clarified. We agree with this recommendation, and would further recommend that the Clarion River Basin mine drainage abatement project be authorized and completed at the earliest possible date.

### Acid Mine Drainage Abatement Program for the Clarion River Basin

In view of the above and because the Pennsylvania Water Supplement recommended the Clarion River Basin Acid Mine Drainage Abatement Project as a top priority project, we concur with the recommendation that it be implemented as an early action element of the plan.

### General Recommendations

We concur in the General Recommendations 2 through 7 on page 8 of the proposed report.

Concerning mine drainage pollution abatement in general, we must emphasize that the Pennsylvania Supplement assigned emergency priority to the Lackawanna River and Susquehanna River Mine Drainage Abatement, Subsidence Prevention, and Flood Protection Project for which studies have already been completed.

We, therefore, urge that, in addition to your recommendation for the Clarion River Basin, this emergency project also be recommended for immediate authorization. Such a recommendation would help to carry out the objectives of the Susquehanna River Basin Mine Drainage Study, authorized by Resolution of the U. S. Senate Committee on Public Works, adopted April 14, 1964, and recommended for expansion and action orientation on page 1-6-89 (Pa.) of the Summary Report. Both the forthcoming Susquehanna River Basin Study Report and the Summary Report of this study recommend mine drainage pollution abatement as the top priority element in their respective early action programs.

Mr. Robert E. Jordan III

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July 6, 1970

We must point out that there are three additional mine drainage abatement projects in the Pennsylvania Water Supplement. These are the Casselman River, Upper West Branch Susquehanna River, and Tioga River Projects. They would protect or enhance water quality in the Corps of Engineers' Curwensville and Tioga-Hammond Reservoirs and in the Upper Casselman River Project.

The Commonwealth now enforces strict laws to prevent mine drainage pollution from active mines and has already in progress the comprehensive mine drainage pollution abatement program being partially financed from our recent \$500 million bond issue. Because the estimated total cost (\$1 billion) of carrying out this program exceeds the portion of the bond issue earmarked for this purpose (\$150 million), direct Federal implementation coordinated with the Commonwealth or substantial Federal financial assistance is essential.

We believe, therefore, that the proposed report should recommend comprehensive action programs to abate mine drainage pollution in Pennsylvania under Federal sponsorship and action, or Federal financial assistance to the Commonwealth for State-sponsored activities.

While the Summary Report stressed the need for, and assigned priorities to, accelerated study of many Pennsylvania projects to permit their early authorization, we note that the proposed report recommends one pilot study and a few studies related to specific projects being considered for future authorization.

We believe that specific recommendations should be made in the Secretary's report for accelerating studies of the Beaver River Basin in Pennsylvania and Ohio, of Raccoon Creek, Big Sandy Creek in Pennsylvania and West Virginia and of Youghiogheny and Upper Casselman River Basins. Further, we believe that additional attention should be given to the proposed navigation facilities in Erie Harbor (West Bay) and accelerated study of the rehabilitation of Presque Isle.

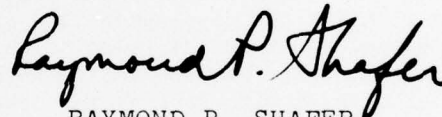
Mr. Robert E. Jordan III

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July 6, 1970

We pledge our support and cooperation in working with the Federal agencies and the Appalachian Regional Commission (or its successor) to continue water resources planning and to secure action under existing and new authorization and funding procedures to be approved by the Congress for implementing as soon as possible the projects recommended in the Pennsylvania Water Supplement, as well as in the Summary Report.

Sincerely,

  
RAYMOND P. SHAFER





ROBERT E. MCNAIR  
GOVERNOR

STATE OF SOUTH CAROLINA  
**Office of The Governor**  
Columbia 29211

July 6, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the Secretary  
of the Army  
Civil Functions  
Department of the Army  
Washington, D.C. 20310

Dear Mr. Jordan:

South Carolina actively participated in preparing a comprehensive plan for the development and efficient utilization of the water and related land resources of the Appalachian Region as a member of the Water Development Coordinating Committee for Appalachia. The relationships with Federal and other State representatives under the leadership of the Corps of Engineers involved in developing this plan have been exceedingly inspiring and profitable.

Although South Carolina constitutes a relatively small part of the total Appalachian area, the significance of the recommendations of the report which pertain to the development of the economic resources in South Carolina Appalachia are nonetheless significant. The comments which are contained herein are the result of both our review of the Army's Report on "Development of Water Resources In Appalachia" and on the Secretary of the Army's Report itself. These comments are presented in the following two categories:

GENERAL

South Carolina wholeheartedly endorses recommendations in the report for major continuing studies and future studies which eventually can provide the basis of a comprehensive regional water development in Appalachia. In particular, it should be the objective to have completed comprehensive river basin surveys in each of the major river basins of the region by 1985.

South Carolina recommends that a continuing Federal-State water resources planning organization be formed in Appalachia to replace the present Water Development Coordinating Committee for Appalachia. Such a Federal-State water resources planning organization should be responsible to the Regional Commission or whatever overall Federal-State instrumentality succeeds it under future legislation.

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South Carolina recommends that Federal grant-in-aid assistance be authorized up to 75 percent of the total cost of projects for upgrading the quality of the environment in Appalachia.

South Carolina feels that to accomplish the economic and social development goals in Appalachia the amounts of local cost-sharing required by applicable statutes and policies should be reduced to be consistent with the non-Federal cost-sharing requirements required in the Appalachian Regional Development Act and other programs.

South Carolina recommends and endorses the Secretary of Army's recommendation to advance funds for all non-Federal project costs for regional development in Appalachia, and no interest accrual for 10 years with repayment thereafter, with interest, over a period of 50 years.

South Carolina endorses the use of regional development benefits as a purpose in project planning.

South Carolina recommends that costs allocated to regional expansion benefits be on a par with flood protection.

#### SPECIFIC PROJECTS

South Carolina strongly endorses the recommendations of both the Water Development Report and the Secretary's Report of the Clinchfield Reservoir in North and South Carolina.

An important axis of growth in Southern Appalachia is the Interstate 85 Corridor from Atlanta to Charlotte. The area in this corridor ranks second only to the Tennessee Valley area of Alabama in its recent rates of economic growth compared to the rest of Appalachia. It is expected that by 1985 the Greenville-Spartanburg portion of this corridor will develop into one of the most important economic centers of the South.

Much of the manufacturing growth in the area has been water related. The economy was earlier based on textiles which in turn attracted chemical industries as inputs for the manufacture of synthetic fibers. Further diversification is now occurring.

Both North and South Carolina have recognized the crucial importance of water supply and pollution control to the growth prospects of the area and Appalachia funds are being used to develop comprehensive water supply and pollution control plans in the two-state area. Implementation of some of the plans being developed for water supply may depend upon transfer from Federally-financed reservoirs.

The Clinchfield Reservoir would provide additional water supply in the Broad River Basin for industrial and municipal use as well as flood control and recreation. It is integrally related to development plans for the area. The project is recommended by the Secretary of the Army.

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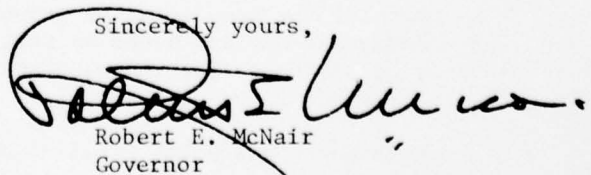
A more in-depth study by a private consultant is now being completed for the South Carolina Appalachian Advisory Commission in the six South Carolina Appalachian counties. This study and accompanying report will emphasize the need for distribution systems from the most reliable source of water to meet these needs. The proposed Clinchfield Reservoir appears to be the most logical source to meet these projected demands over the next 30 years. The report recommends this reservoir. Furthermore, we recommend that the primary water distribution system be included in this project as a project measure with the same cost-sharing arrangement for other Appalachia projects.

South Carolina recommends that the Secretary of Agriculture expedite the planning and construction of the four small watershed protection and flood prevention projects under PL 566 which are required by the highest priority for effectively serving the development of Appalachian South Carolina. These are 18 Mile Creek in Pickens County, Oolenoy Creek Watershed in Pickens County (adjacent to Appalachia Scenic Highway), North Tyger Watershed in Spartanburg County, and 3 and 20 Watershed in Anderson County. The first two should receive expedited planning and construction. The last two require expedited construction only. These are four of the twelve presently authorized small watersheds in the six-county Appalachia area in various stages of planning and construction. These four watersheds when completed will have quite an impact on improvement of the environment, public water supplies for economic development, and providing additional recreation for the area.

Generally speaking, South Carolina concurs with all the recommendations of both the Secretary of the Army and the Water Development Report.

South Carolina wishes to congratulate Colonel John C. H. Lee, Jr., his staff, and their associates on the excellent job accomplished on this study. We appreciate very much to have had the opportunity to participate actively in the conduct of this study and we hope to continue this role in future proceedings.

Sincerely yours,



Robert E. McNair  
Governor

REM:RM

cc: Mr. John Whisman  
State's Regional Representative  
Appalachian Regional Commission  
1666 Connecticut Avenue  
Washington, D.C.

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DEPARTMENT OF THE ARMY WASHINGTON D C  
DEVELOPMENT OF WATER RESOURCES IN APPALACHIA. REPORT OF THE SEC--ETC(U)  
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Mr. Robert E. Jordan, III  
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July 6, 1970

cc: Mr. Ralph R. Widner  
Executive Director  
Appalachian Regional Commission  
1666 Connecticut Avenue  
Washington, D. C.

Mr. Clair P. Guess, Jr.  
Executive Director  
South Carolina Water Resources Commission  
2414 Bull Street  
Columbia, South Carolina



**TENNESSEE**  
**EXECUTIVE CHAMBER**  
**NASHVILLE 37219**

BUFORD ELLINGTON  
GOVERNOR

July 2, 1970

Mr. Robert E. Jordan, III  
Special Assistant to the Secretary  
of the Army  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

The water resources development plan for Appalachia represents a significant new approach to federal-state cooperation. In our area, breakthroughs established in this present planning effort should be seized and institutionalized by both state and federal agencies to achieve a maximum utilization of water resources.

Specifically, we feel that, a continuing organization should be developed with appropriate staff capabilities. In addition, possible avenues for acquiring the necessary funds to carry out plan priorities need to be explored, such as: Uniform project requirements across program lines, creation of new federal grant-in-aid programs to implement comprehensive water resource projects, and revision of cost benefits analysis on water resource projects to reflect economic growth strategies and a wider range of applicable uses.

Furthermore, special consideration should be given to increasing the federal share of costs on water resource projects with economic development potential and on increasing the federal share of project costs in depressed areas. Interest-free or low-cost loans should be made available to local governments to allow them to meet the local share requirements of major developmental projects which will ultimately benefit the entire region and its economy.

One item in the Summary Report, Development of Water Resources in Appalachia, concerns us greatly. Table 11 - 1, entitled "Priorities for Some Early Action Elements within the Appalachian Water Development Plan", (pages I - 11-2 and I - 11-3) lists, in descending order, a series of priority projects for each state. Our sister states, Alabama and Mississippi, place top priority on development of navigational works on the Tennessee-Tombigbee Waterway system. Tennessee

Mr. Robert E. Jordan, III  
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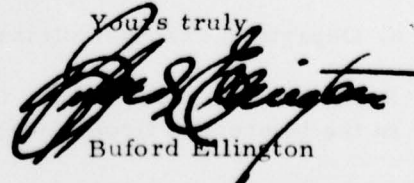
has listed the improvement of local flood protection for growth centers as its top priority. The Tennessee-Tombigbee Waterway was not mentioned as a priority within this report because its location is not in Tennessee's Appalachian Region. However, from the viewpoint of immediate economic gain and expanding economic growth potential, I want to make it clear that the Tennessee-Tombigbee Waterway is a top priority project for Appalachian Tennessee.

Transportation is indeed an essential aspect of economic development and expansion. It has a profound effect in setting patterns for the distribution of economic activities. The transportation system facilitates commerce, ties resources to markets, and cements regions together. A fundamental relationship exists between the degree of economic development and the quality of transportation. If the transit system facilitates the movement of goods with a high degree of efficiency and at low costs, it stimulates economic growth. Improvements in transportation systems tend to channel growth into specific locations. The Tennessee-Tombigbee Waterway, although physically located in Alabama and Mississippi, will have direct and substantial effects, in terms of lower costs for waterborne transportation, on Knoxville, Chattanooga, and the Great Valley of the Tennessee River. As an example:

Waterway Miles Saved From Tennessee Cities to the  
Gulf Coast by the Tennessee-Tombigbee Channel

From	To	Waterway Miles		Miles Saved	Percent Reduction
		Via Mississippi River	Via Tennessee- Tombigbee		
Knoxville	Mobile	1723	902	821	48%
Chattanooga	Mobile	1539	718	821	53%
Chattanooga	New Orleans	1579	878	501	32%

Tennessee shares with the States of Alabama and Mississippi an urgent desire to see the Tennessee-Tombigbee Waterway completed as rapidly as possible.

Yours truly,  
  
Buford Ellington



LINWOOD HOLTON  
GOVERNOR

COMMONWEALTH OF VIRGINIA  
GOVERNOR'S OFFICE  
RICHMOND 23219

July 6, 1970

Mr. Robert E. Jordan, III, Special Assistant  
to the Secretary of the Army (Civil Functions)  
Headquarters  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

This is in reference to your letter of April 7, 1970, with which you provided for comment a copy of the proposed report of the Secretary of the Army, together with other relevant papers, on the "Development of Water Resources in Appalachia."

The Secretary's proposed report of study of the water resources of the Appalachian Region is commendable and emphasizes subjects most pertinent to the overall goals and objectives to improve and enhance the welfare of those in the Appalachian Region. Our comments herein will be limited to that portion of the proposed report applicable to the 21 counties in the Virginia portion of the Appalachian Region.

Note is made of the fact that the recommended plan of development includes the following projects pertinent to and affecting the Virginia portion of the Region:

1. The completion of flood plain information studies by the Corps of Engineers for Potts Creek near Covington, Craig Creek near Eagle Rock, Cowpasture River near Clifton Forge, and for Bluestone River near Bluefield.
2. Studies to be completed by the Tennessee Valley Authority for local flood protection for Big Stone Gap and for the industrial park near Duffield.
3. U. S. Department of Agriculture upstream watershed projects for:
  - a. South Fork Roanoke River, in Floyd and Montgomery Counties, in the interest of flood control.



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- b. Johns Creek, in Craig and Giles Counties, in the interest of flood control.
  - c. Headwaters of Holston River, Bland, Smyth, and Tazewell Counties, in the interest of flood control, water supply, and recreation.
  - d. Upper Bluestone River, in Tazewell County, in the interest of flood control and water quality control.
  - e. Upper Clinch River, upstream from the Town of Tazewell, in the interest of flood control and water supply.
  - f. Tributaries in the James, Kanawha, and Tennessee Basins located within the bounds of national forest lands.
4. Accelerated land treatment measures under ongoing programs of the U. S. Department of Agriculture.
5. Accelerated recreation development by the National Forest Service within the bounds of national forest lands.
6. The Hipes multipurpose project which would be located in Botetourt and Craig Counties on Craig Creek within the boundaries of the Jefferson National Forest, the purposes of which would include flood control, water quality control, recreation, fishery enhancement, and economic development.
7. Continuing studies which affect Virginia to include:
- a. Comprehensive survey report for the James River Basin.
  - b. Comprehensive survey report for the Kanawha River Basin.
  - c. Survey report for the Big Sandy River and tributaries.
  - d. Water quality improvement alternatives for the North Fork Holston River near Saltville.
8. Future planning after the year 1990, for U. S. Department of Agriculture upstream watershed projects in accordance with the then current U. S. D. A. conservation needs inventory.

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We concur generally with that portion of the water resources development plan and with those recommendations found in the proposed report of the Secretary of the Army which are pertinent to the Virginia portion of the Appalachian Region.

More specifically, we concur with the recommendation that the proposed Hipes Dam and Reservoir project be authorized by the Congress of the United States to provide for its construction, operation, and maintenance, contingent upon the condition that all phases of the detailed project sizing, design, construction, and reservoir operation conform to the satisfaction of the Board of Conservation and Economic Development in coordination with other appropriate local and state interests.

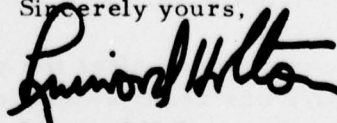
We concur with the recommendation for construction and operation of the six U. S. Department of Agriculture upstream watershed projects for the purposes as proposed with the hope that projects on Mudfork and on Brush Fork in the Bluestone River Watershed are included in the early phase of implementation of the plan.

In addition to the U. S. Department of Agriculture, TVA, and Corps of Engineers' projects recommended in the plan, it is recommended that study be made of the Brushy Mountain Gap Dam site (drainage area about 60 square miles) on North Fork Holston River with a view toward the provision of increased stream flow in the interest of improved water quality in North Fork Holston River downstream from Saltville, Virginia.

It is recommended that the results of water resources studies now under way, and yet to be undertaken by the water resources planning agencies of the Commonwealth, be incorporated in plans for development and management of the water resources of the Virginia portion of the Appalachian Region.

Thank you for the opportunity to comment.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Linwood Holton", written in a cursive style.

Linwood Holton

If



STATE OF WEST VIRGINIA  
OFFICE OF THE GOVERNOR  
CHARLESTON 25305

ARCH A. MOORE, JR.  
GOVERNOR

July 10, 1970

Mr. Robert E. Jordan III  
Special Assistant to the Secretary  
of the Army (Civil Functions)  
Department of the Army  
Washington, D. C. 20310

Dear Mr. Jordan:

This letter is in reference to the proposed report of the Secretary of the Army on Development of Water Resources in Appalachia.

A comprehensive study such as this, involving not only a broad geographic expanse but the complexities of water resource planning, is certainly a major challenge. All members of the study group are to be commended for the degree of coordination attained and the innovative approaches applied.

The following points are relative to the report and are of particular significance. I submit them to you for your consideration.

(a) West Virginia is approaching economic development on a regional basis, and we are having success in this means of attack. It is our opinion that regional economic development should be a project purpose in water resource planning as proposed in the studies prepared but which is not represented in the report of the Secretary of the Army. The State also favors the allocation of project costs to regional economic development and/or expansion.

We would prefer to see project costs, such as recreation, low-flow augmentation, industrial and municipal water supply, and fish and wildlife, funded by the Federal Government. We think that such a program would be in the national interest through the regional development of this area of the United States. At the same time, we support the need for state and local assurances for related development activity.



OFFICE OF THE GOVERNOR

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(b) We concur with the proposed report and its recommendation for advance federal funds for state and local shares of all eligible project costs with no repayment and no interest accrual for ten years and with repayment thereafter, with interest, over a period of fifty years.

(c) The State of West Virginia has no specific comment at this time on the small watershed projects of the U. S. Department of Agriculture as shown in Summary Report, Part I, Page I-77. However, detailed comments will be submitted on individual projects as the proposals for construction become available for review. The State will have an opportunity to react to each individual project as a result of the Intergovernmental Cooperation Act. The clearinghouse at the state level is the Governor's Office of Federal-State Relations. In addition to the review conducted as a result of the Intergovernmental Cooperation Act, the Department of Agriculture is urged to coordinate its planning with the Department of Natural Resources and the Outdoor Recreation Division, Office of Federal-State Relations.

(d) West Virginia will require further detailed study concerning the proposed Royal Glen Reservoir and all alternatives before we can support construction for the project. Further consideration should be given to alternative project formulation by additional studies of separate local flood protection and recreation projects.

Current data available for our review are not sufficient to determine what degree of protection will be afforded the unique segment of the Smoke Hole country and the Smoke Hole Caverns.

(e) The Dry Fork of the Tug Fork River of the Big Sandy Basin in West Virginia should be studied for flood control protection. The State favors this site over the proposed Lower Knox Creek Reservoir in Kentucky.

(f) It is herein recommended that the proposed Swiss Reservoir on the Gauley River in Nicholas County be given immediate action for a survey scope study of its potential. This project can satisfy a significant portion of the water quality needs of the Lower Kanawha River as well as provide recreational and power potential.



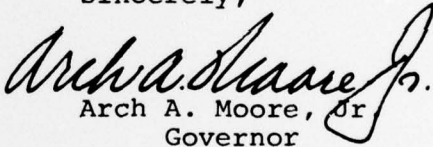
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(g) An acid mine drainage abatement program in West Virginia should be developed, particularly in regard to abandoned mines. It is recommended that the Corps of Engineers be authorized to undertake a program for abatement of acid mine drainage in the state, especially in the Monongahela and Potomac River basins.

In conclusion, we think that this study may well serve as a model to the nation in demonstrating innovations in water resource development. We are very much in favor of a continuing federal-state coordination on water resource planning in the other significant functional areas of government.

Sincerely,

  
Arch A. Moore, Jr.  
Governor

AAMJr:mb